SUPPLEMENT NO. 1

PHILIP R SMITH ELEMENTARY SCHOOL
GILBANE JOB NO. J07896.000
STATE PROJECT NO. 132-0089N

Bid Packages: All

NOTE: TO DOWNLOAD THE ENTIRE SUPPLEMENT, INCLUDING ATTACHMENTS GO TO
https://dn.gilbaneco.com/?linkid=KZi4zr6VWWVXNsMnvbsEnZ2meBg8FDQW3YbODS6ncAGbVD1e6L4NWQ

The following items are hereby made part of the bid documents for the Philip R Smith Elementary School Project in South Windsor, CT:

1. Moser Pilon Nelson PRS-SI-007 Owner Room Names and Signage dated August 2, 2019 has been issued.
2. Moser Pilon Nelson Addendum No. 1 dated February 19, 2019 has been issued.
3. Moser Pilon Nelson Addendum No. 2 dated February 21, 2019 has been issued.
4. Moser Pilon Nelson Addendum No. 3 dated March 21, 2019 has been issued.
5. Reference Gilbane Project Manual, 00 73 46 Prevailing Wage Rates have been updated.

Sincerely,
GILBANE BUILDING COMPANY

Stephanie Greenman
Preconstruction Manager

Cc: Project Team
File

----------End of Supplement 1 ----------

MOSER
PILON
NELSON
ARCHITECTS

SUPPLEMENTAL INSTRUCTIONS

Philip R. Smith Elementary School
South Windsor, CT

PRS-SI-0007
Owner Room Names and Signage
August 2, 2019

The following PRS-SI-0007, forms a part of the Contract Documents and modifies the original specifications and drawings labeled; Conformed Set March 22, 2019, for Town of South Windsor Philip R. Smith Elementary School.

If the following supplemental instructions are without change in Contract Sum or Contract time, the Contractor shall carry out the Work in accordance with the following supplemental instructions. Proceeding with the work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time

If the following supplemental instructions results in a change in Contract Sum or Contract time, please submit an itemized proposal for proposed modifications to the Contract Documents described herein. Within fourteen (14) days, the Contractor must submit this proposal or notify the Architect in writing of the date on which proposal submission is anticipated.

Description:

This Supplemental Instruction, PRS-SI-007, updates the room names and numbers to the final designations per the owner's review. The SI also revises and deletes sign types as noted below.

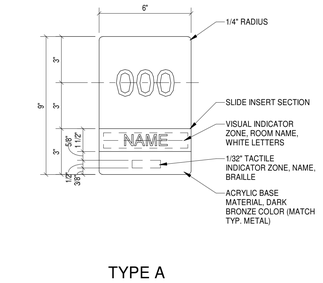
Revisions include but are not limited to the list below. Refer to attached revised sheets for complete scope.

Revision List:

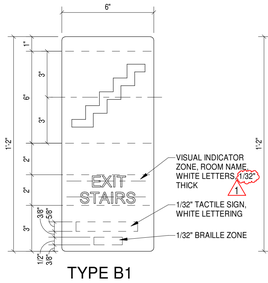
Note, for clarity, the room numbers referenced below are the original construction document designations.

- **REVISE** room names and numbers per Owner's review
- **REVISE** letter and character thickness from 1/4" to 1/32" at Signage Types B, C, D, E, F, and G
- **DELETE** Type A sign from the following rooms:
  - 183, 193, 281, 285,
- **REVISE** Type D sign to Type A sign in the following rooms:
  - 109B, 110, 117 117A,
- **REVISE** Type A sign to Type D sign in the following rooms:
  - 119B, 124

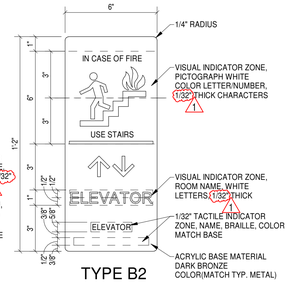
Attachments:
A11.5 (revision tagged 1), A11.6 (added sheet)



TYPE A



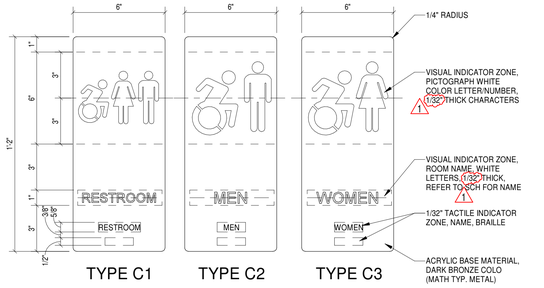
TYPE B1



TYPE B2

SIGNAGE TYPE A

3" = 1'-0"



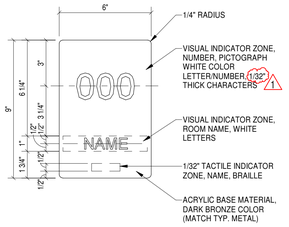
TYPE C1 TYPE C2 TYPE C3

SIGNAGE TYPE B EGRESS

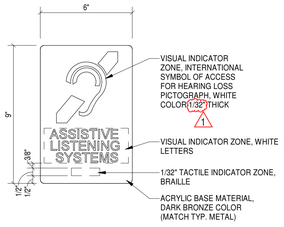
3" = 1'-0"

SIGNAGE TYPE C TOILETS

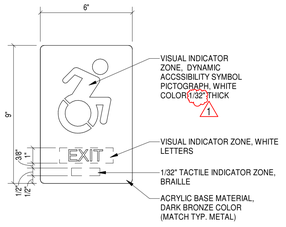
3" = 1'-0"



TYPE D



TYPE E1



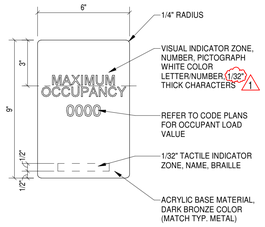
TYPE E2

SIGNAGE TYPE D

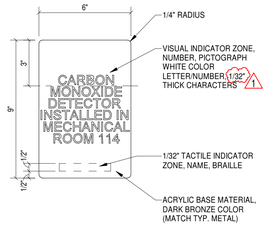
3" = 1'-0"

SIGNAGE TYPE E

3" = 1'-0"



TYPE F



TYPE G

SIGNAGE TYPE F

3" = 1'-0"

SIGNAGE TYPE G

3" = 1'-0"

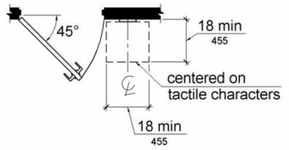
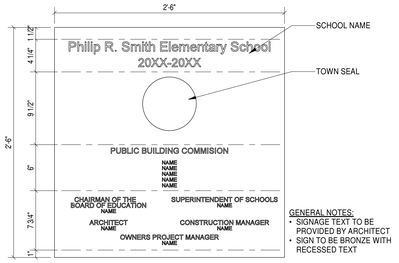
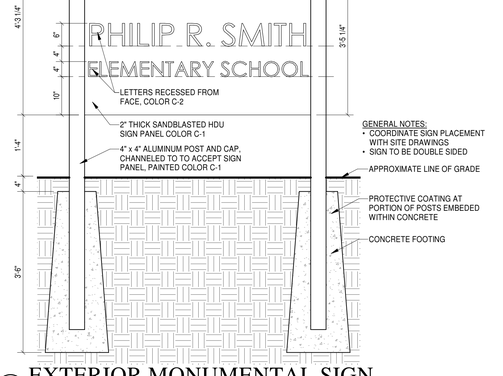


Figure 703.4.2
Location of Tactile Signs at Doors



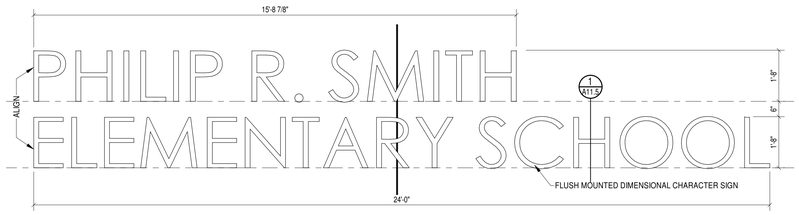
7 A11.5 DEDICATION PLAQUE
1 1/2" = 1'-0"



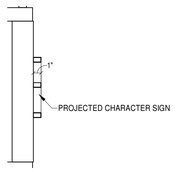
6 A11.5 EXTERIOR MONUMENTAL SIGN
3/4" = 1'-0"

5 A11.5 PROJECTED CHARACTER SIGN
3/4" = 1'-0"

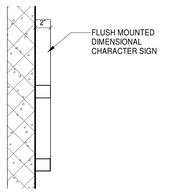
4 A11.5 PROJECTED CHARACTER SIGN
3/4" = 1'-0"



1 A11.5 FABRCATED METAL LETTERING
1/2" = 1'-0"



2 A11.5 SIGN SECTION
1 1/2" = 1'-0"



1 A11.5 SIGN SECTION
1 1/2" = 1'-0"

SIGNAGE SCHEDULE - FIRST FLOOR

CONSTRUCTION DOCUMENTS ROOM NUMBER AND NAME		SIGNAGE ROOM NUMBER AND NAME			
NUMBER	NAME	TYPE	SIGN NUMBER	SIGN NAME	COMMENTS
101	MAIN OFFICE SECRETARIAL AREA	D	118A	MAIN OFFICE	
101A	MAIN OFFICE CONFERENCE ROOM	D	118C	CONFERENCE ROOM	
101B	PRINCIPAL'S OFFICE	A	118D	PRINCIPAL	
101C	TOILET	C1	T118E	TOILET	
102	HEALTH SERVICES	A	118B	NURSE	
102A	TOILET	C1	T118F	TOILET	
102B	CONSULTATION ROOM	D	118G	CONSULTATION	
102C	SUPPLY ROOM	D	118H	SUPPLY	
103	FACULTY LOUNGE	A	116	FACULITY LOUNGE	
104	MEDIA CENTER	D	114	MEDIA CENTER	
104A	MEDIA CENTER OFFICE	A	114A	OFFICE	
104B	VIDEO PRODUCTION LAB	A	114B	VIDEO PRODUCTION	
104C	MEDIA CENTER WORKROOM	A	114C	WORKROOM	
105	STEM LAB	A	112	STEM LAB	
106	CAFETERIA	D, E-1, F	108	CAFETERIA	TYPE E1 & F SIGNS LOCATED ADJACENT TO DOOR 117E.1
107	BOYS' TOILET	C2	T106A	BOYS TOILET	
108	GIRLS' TOILET	C3	T106B	GIRLS TOILET	
109	KITCHEN	D	103	KITCHEN	
109A	KITCHEN STORAGE	D	S103	STORAGE	
109B	FOOD MANAGER'S OFFICE	A	103A	OFFICE	
110	CUSTODIAL OFFICE	A	104	OFFICE	
111	GENERAL STORAGE	D	S100A	STORAGE	
111A	OUTDOOR EQUIPMENT STORAGE	D	S100B	STORAGE	MOUNTED ON EXTERIOR
112	TOILET	C1	T101	TOILET	
113	MAIN ELECTRICAL	D	E102A	ELECTRICAL	
114	MECHANICAL	D	M102B	MECHANICAL	
115	IT	D	E102C	IT	
116	CUSTODIAL STORAGE	D	105	CUSTODIAL	
117	GYMNASIUM	A, E-1, E-2, F	107	GYMNASIUM	TYPE E1 & F SIGNS LOCATED ADJACENT TO DOOR 117E.1, TYPE E2 SIGN LOCATED ADJACENT TO DOORS 117.1, 117.2, & 117.3
117A	P.E. OFFICE	A	107B	OFFICE	
117B	P.E. STORAGE	D	S107C	STORAGE	
117C	CHAIR STORAGE	D	S107D	STORAGE	
117D	A/V CLOSET	D	S107A	A/V	
118	INSTRUMENTAL MUSIC AND PLATFORM	A, E2, D	109	PLATFORM	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 118.1, TYPE A SIGN LOCATED ADJACENT TO DOOR 118C.1, TYPE D SIGN LOCATED ADJACENT TO DOOR 118C.2
118A	STORAGE	D	S109	STORAGE	
118B	PRACTICE ROOM	A	109A	PRACTICE ROOM	
119	VISUAL ARTS CLASSROOM	A	110	ART	
119A	VISUAL ARTS STORAGE	D	S110	STORAGE	
119B	KILN ROOM	D	110A	KILN ROOM	
120	GENERAL MUSIC	A	111	MUSIC	
121	TOILET	C2	T113	TOILET	
122	TOILET	C3	T115	TOILET	
123	TEACHER WORKROOM	D	117	WORKROOM	
123A	STORAGE	D	S117	STORAGE	
124	RELATED SERVICES SUITE	D	119	STUDENT SERVICES	
124A	CONFERENCE ROOM	D	119A	CONFERENCE ROOM	
124B	SOCIAL WORKER	A	119B	OFFICE	
124C	WORLD LANGUAGES	A	119C	OFFICE	
124D	SPEECH	A	119D	OFFICE	
124E	PSYCHOLOGIST	A	119E	OFFICE	
124F	STORAGE	D	S119	STORAGE	
125	ELECTRICAL CLOSET	D	121	ELECTRICAL	
126	CUSTODIAL STORAGE	D	S123	STORAGE	
127	ENGLISH LEARNERS	A	127	CLASSROOM	
128	MATH INTERVENTION	A	129	CLASSROOM	
129	GRADES 1-2 CLASSROOM	A	131	CLASSROOM	
129A	TOILET	C1	T131	TOILET	
130	GRADES 1-2 CLASSROOM	A	133	CLASSROOM	
130A	TOILET	C1	T133	TOILET	
131	GRADES 1-2 CLASSROOM	A	135	CLASSROOM	
131A	TOILET	C1	T135	TOILET	
132	KINDERGARTEN	A	138	CLASSROOM	
132A	TOILET	C1	T138	TOILET	
133	KINDERGARTEN	A	137	CLASSROOM	
133A	TOILET	C1	T137	TOILET	
134	KINDERGARTEN	A	136	CLASSROOM	
134A	TOILET	C1	T136	TOILET	
135	GRADES 1-2 CLASSROOM	A	132	CLASSROOM	
135A	TOILET	C1	T132	TOILET	
136	GRADES 1-2 CLASSROOM	A	130	CLASSROOM	
136A	TOILET	C1	T130	TOILET	
137	GRADES 1-2 CLASSROOM	A	128	CLASSROOM	
137A	TOILET	C1	T128	TOILET	
138	GRADES 1-2 CLASSROOM	A	126	CLASSROOM	
138A	TOILET	C1	T126	TOILET	
139	READING INTERVENTION	A	124	CLASSROOM	
139A	INSTRUCTIONAL STORAGE	D	S124	STORAGE	
140	SPECIAL EDUCATION RESOURCE ROOM	A	122	CLASSROOM	
141	OT/PT RESOURCE ROOM	A	120	OT/PT	
181	EAST LOBBY	E2	186		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 181.2
184	CORRIDOR	E2	187		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 185.1
186	WEST LOBBY	E2	183		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 187.1
188	CORRIDOR	E2	182		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 189.1
190	SERVICE CORRIDOR	E2, G	180		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 190, TYPE G SIGN LOCATED ADJACENT TO DOOR 114.1
192	CORRIDOR	E2	191		TYPE E2 SIGN LOCATED ADJACENT TO DOOR 192
EL-1	ELEV.	B2	EL-1	ELEVATOR	
S101	SOUTH STAIR	B1	125C7	STAIR C7	
S102	NORTH STAIR	B1	134A10	STAIR A10	

1

SIGNAGE SCHEDULE - SECOND FLOOR INCLUDES ALTERNATE 1

CONSTRUCTION DOCUMENTS ROOM NUMBER AND NAME		SIGNAGE ROOM NUMBER AND NAME			
NUMBER	NAME	TYPE	SIGN NUMBER	SIGN NAME	COMMENTS
201	SPECIAL EDUCATION RESOURCE ROOM	A	217	CLASSROOM	
202	GENERAL STORAGE	D	S219	STORAGE	
203	TOILET	C2	T221A	TOILET	
204	TOILET	C2	T221B	TOILET	
205	IDF	A	E221C	IT	
206	GRADES 2-5 FLEXIBLE CLASSROOM	A	225	CLASSROOM	
207	GRADES 3-5 CLASSROOM	A	227	CLASSROOM	
208	GRADES 3-5 CLASSROOM	A	229	CLASSROOM	
209	GRADES 3-5 CLASSROOM	A	231	CLASSROOM	
210	GRADES 3-5 CLASSROOM	A	235	CLASSROOM	
211	GRADES 3-5 CLASSROOM	A	234	CLASSROOM	
212	GRADES 3-5 CLASSROOM	A	233	CLASSROOM	
213	GRADES 3-5 CLASSROOM	A	230	CLASSROOM	
214	GRADES 3-5 CLASSROOM	A	228	CLASSROOM	
215	GRADES 3-5 CLASSROOM	A	226	CLASSROOM	
216	GRADES 2-5 FLEXIBLE CLASSROOM	A	224	CLASSROOM	
217	GRADES 2-5 FLEXIBLE CLASSROOM	A	222	CLASSROOM	
218	INSTRUCTIONAL STORAGE	A	S220	STORAGE	
219	BOYS' TOILET	C2	T218A	BOYS TOILET	
220	GIRLS' TOILET	C3	T218B	GIRLS TOILET	
282	CORRIDOR	E2	280		TYPE E2 SIGN LOCATED ADJACENT TO DOOR S201
284	CORRIDOR	E2	282		TYPE E2 SIGN LOCATED ADJACENT TO DOOR S202
S201	SOUTH STAIR	B1	223C7	STAIR C7	
S202	NORTH STAIR	B1	232A10	STAIR A10	

REVISIONS
CONFORMED SET
MARCH 22, 2019
1 7/30/19 PRS-SI-0007

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
949 AVERY STREET
SOUTH WINDSOR, CT 06074

PHILIP R. SMITH ELEMENTARY SCHOOL

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
SIGNAGE AND SIGNAGE SCHEDULE

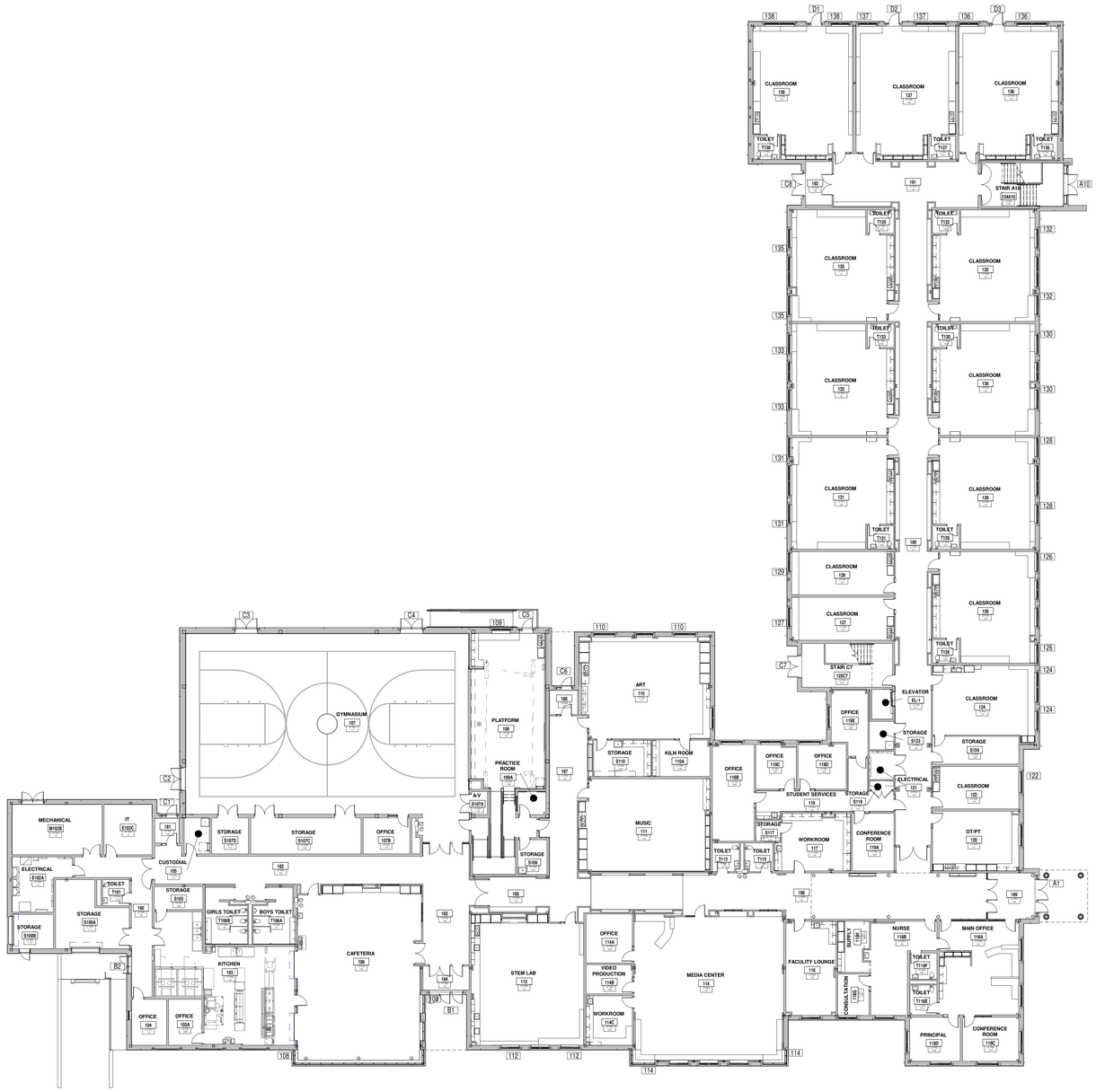
DATE 11/2/2018

DWG. NO.
A11.5

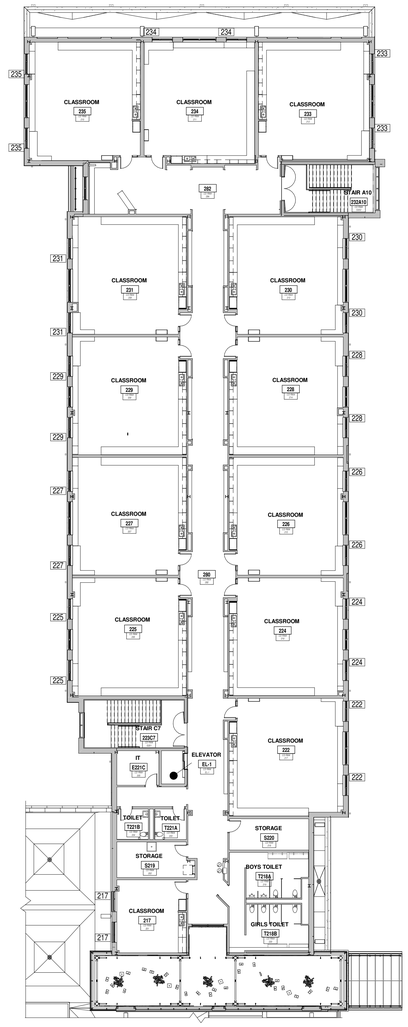
MPN Project Number: 2017225.00

LEGEND

ROOM NAME (SIGN) — SIGN ROOM NAME
000 — SIGN ROOM NUMBER
CONSTRUCTION DOCUMENTS ROOM NUMBER
XXX — DOOR / ROOM NUMBER IDENTIFICATION SIGNAGE



1 A11.6 FIRST FLOOR PLAN
1/16" = 1'-0"



2 A11.6 SECOND FLOOR PLAN
1/16" = 1'-0"

OWNER ROOM NAMES AND NUMBERS - FIRST FLOOR

CONSTRUCTION DOCUMENTS ROOM NUMBER AND NAME		SIGNAGE ROOM NUMBER AND NAME			
NUMBER	NAME	SIGN NUMBER	SIGN NAME	SIGN TYPE	COMMENTS
101	MAIN OFFICE SECRETARIAL AREA	118A	MAIN OFFICE	D	
101A	MAIN OFFICE CONFERENCE ROOM	118C	CONFERENCE ROOM	D	
101B	PRINCIPAL'S OFFICE	118D	PRINCIPAL	A	
101C	TOILET	T118E	TOILET	C1	
102	HEALTH SERVICES	118B	NURSE	A	
102A	TOILET	T118F	TOILET	C1	
102B	CONSULTATION ROOM	118G	CONSULTATION	D	
102C	SUPPLY ROOM	118H	SUPPLY	D	
103	FACULTY LOUNGE	116	FACULITY LOUNGE	A	
104	MEDIA CENTER	114	MEDIA CENTER	D	
104A	MEDIA CENTER OFFICE	114A	OFFICE	A	
104B	VIDEO PRODUCTION LAB	114B	VIDEO PRODUCTION	A	
104C	MEDIA CENTER WORKROOM	114C	WORKROOM	A	
105	STEM LAB	112	STEM LAB	A	
106	CAFETERIA	108	CAFETERIA	D, E-1, F	TYPE E1 & F SIGNS LOCATED ADJACENT TO DOOR 117E.1
107	BOYS' TOILET	T106A	BOYS TOILET	C2	
108	GIRLS' TOILET	T106B	GIRLS TOILET	C3	
109	KITCHEN	103	KITCHEN	D	
109A	KITCHEN STORAGE	S103	STORAGE	D	
109B	FOOD MANAGER'S OFFICE	103A	OFFICE	A	
110	CUSTODIAL OFFICE	104	OFFICE	A	
111	GENERAL STORAGE	S100A	STORAGE	D	
111A	OUTDOOR EQUIPMENT STORAGE	S100B	STORAGE	D	MOUNTED ON EXTERIOR
112	TOILET	T101	TOILET	C1	
113	MAIN ELECTRICAL	E102A	ELECTRICAL	D	
114	MECHANICAL	M102B	MECHANICAL	D	
115	IT	E102C	IT	D	
116	CUSTODIAL STORAGE	105	CUSTODIAL	D	
117	GYMNASIUM	107	GYMNASIUM	A, E-1, E-2, F	TYPE E1 & F SIGNS LOCATED ADJACENT TO DOOR 117E.1, TYPE E2 SIGN LOCATED ADJACENT TO DOORS 117.1, 117.2, & 117.3
117A	P.E. OFFICE	107B	OFFICE	A	
117B	P.E. STORAGE	S107C	STORAGE	D	
117C	CHAIR STORAGE	S107D	STORAGE	D	
117D	A/V CLOSET	S107A	A/V	D	
118	INSTRUMENTAL MUSIC AND PLATFORM	109	PLATFORM	A, E2, D	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 118.1, TYPE A SIGN LOCATED ADJACENT TO DOOR 118C.1, TYPE D SIGN LOCATED ADJACENT TO DOOR 118C.2
118A	STORAGE	S109	STORAGE	D	
118B	PRACTICE ROOM	109A	PRACTICE ROOM	A	
119	VISUAL ARTS CLASSROOM	110	ART	A	
119A	VISUAL ARTS STORAGE	S110	STORAGE	D	
119B	KILN ROOM	110A	KILN ROOM	D	
120	GENERAL MUSIC	111	MUSIC	A	
121	TOILET	T113	TOILET	C2	
122	TOILET	T115	TOILET	C3	
123	TEACHER WORKROOM	117	WORKROOM	D	
123A	STORAGE	S117	STORAGE	D	
124	RELATED SERVICES SUITE	119	STUDENT SERVICES	D	
124A	CONFERENCE ROOM	119A	CONFERENCE ROOM	D	
124B	SOCIAL WORKER	119B	OFFICE	A	
124C	WORLD LANGUAGES	119C	OFFICE	A	
124D	SPEECH	119D	OFFICE	A	
124E	PSYCHOLOGIST	119E	OFFICE	A	
124F	STORAGE	S119	STORAGE	D	
125	ELECTRICAL CLOSET	121	ELECTRICAL	D	
126	CUSTODIAL STORAGE	S123	STORAGE	D	
127	ENGLISH LEARNERS	127	CLASSROOM	A	
128	MATH INTERVENTION	129	CLASSROOM	A	
129	GRADES 1-2 CLASSROOM	131	CLASSROOM	A	
129A	TOILET	T131	TOILET	C1	
130	GRADES 1-2 CLASSROOM	133	CLASSROOM	A	
130A	TOILET	T133	TOILET	C1	
131	GRADES 1-2 CLASSROOM	135	CLASSROOM	A	
131A	TOILET	T135	TOILET	C1	
132	KINDERGARTEN	138	CLASSROOM	A	
132A	TOILET	T138	TOILET	C1	
133	KINDERGARTEN	137	CLASSROOM	A	
133A	TOILET	T137	TOILET	C1	
134	KINDERGARTEN	136	CLASSROOM	A	
134A	TOILET	T136	TOILET	C1	
135	GRADES 1-2 CLASSROOM	132	CLASSROOM	A	
135A	TOILET	T132	TOILET	C1	
136	GRADES 1-2 CLASSROOM	130	CLASSROOM	A	
136A	TOILET	T130	TOILET	C1	
137	GRADES 1-2 CLASSROOM	128	CLASSROOM	A	
137A	TOILET	T128	TOILET	C1	
138	GRADES 1-2 CLASSROOM	126	CLASSROOM	A	
138A	TOILET	T126	TOILET	C1	
139	READING INTERVENTION	124	CLASSROOM	A	
139A	INSTRUCTIONAL STORAGE	S124	STORAGE	D	
140	SPECIAL EDUCATION RESOURCE ROOM	122	CLASSROOM	A	
141	OT/PT RESOURCE ROOM	120	OT/PT	A	
181	EAST LOBBY	186		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 181.2
184	CORRIDOR	187		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 185.1
186	WEST LOBBY	183		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 187.1
188	CORRIDOR	182		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 189.1
190	SERVICE CORRIDOR	180		E2, G	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 190, TYPE G SIGN LOCATED ADJACENT TO DOOR 114.1
192	CORRIDOR	191		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR 192
EL-1	ELEV.	EL-1	ELEVATOR	B2	
S101	SOUTH STAIR	125C7	STAIR C7	B1	
S102	NORTH STAIR	134A10	STAIR A10	B1	

OWNER ROOM NAMES AND NUMBERS - SECOND FLOOR

CONSTRUCTION DOCUMENTS ROOM NUMBER AND NAME		SIGNAGE ROOM NUMBER AND NAME			
NUMBER	NAME	SIGN NUMBER	SIGN NAME	SIGN TYPE	COMMENTS
201	SPECIAL EDUCATION RESOURCE ROOM	217	CLASSROOM	A	
202	GENERAL STORAGE	S219	STORAGE	D	
203	TOILET	T221A	TOILET	C2	
204	TOILET	T221B	TOILET	C2	
205	IDF	E221C	IT	A	
206	GRADES 2-5 FLEXIBLE CLASSROOM	225	CLASSROOM	A	
207	GRADES 3-5 CLASSROOM	227	CLASSROOM	A	
208	GRADES 3-5 CLASSROOM	229	CLASSROOM	A	
209	GRADES 3-5 CLASSROOM	231	CLASSROOM	A	
210	GRADES 3-5 CLASSROOM	235	CLASSROOM	A	
211	GRADES 3-5 CLASSROOM	234	CLASSROOM	A	
212	GRADES 3-5 CLASSROOM	233	CLASSROOM	A	
213	GRADES 3-5 CLASSROOM	230	CLASSROOM	A	
214	GRADES 3-5 CLASSROOM	228	CLASSROOM	A	
215	GRADES 3-5 CLASSROOM	226	CLASSROOM	A	
216	GRADES 2-5 FLEXIBLE CLASSROOM	224	CLASSROOM	A	
217	GRADES 2-5 FLEXIBLE CLASSROOM	222	CLASSROOM	A	
218	INSTRUCTIONAL STORAGE	S220	STORAGE	A	
219	BOYS' TOILET	T218A	BOYS TOILET	C2	
220	GIRLS' TOILET	T218B	GIRLS TOILET	C3	
282	CORRIDOR	280		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR S201
284	CORRIDOR	282		E2	TYPE E2 SIGN LOCATED ADJACENT TO DOOR S202
S201	SOUTH STAIR	223C7	STAIR C7	B1	
S202	NORTH STAIR	232A10	STAIR A10	B1	

REVISIONS
CONFORMED SET
MARCH 22, 2019
1 7/30/19 PRS-SI-0007

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
OWNER ROOM NAMES AND NUMBERS, AND IDENTIFICATION SIGNAGE PLAN

DATE 11/2/2018

DWG. NO. A11.6

MPN Project Number: 2017225.00

OSCGR PROJECT NO. 132-0089 N • PHASE 2 OF 5
SITE AND BUILDING CONSTRUCTION
PHILIP R. SMITH ELEMENTARY SCHOOL
SOUTH WINDSOR, CONNECTICUT

ADDENDUM NUMBER ONE

February 19, 2019

The following Addendum Number One forms a part of the Contract Documents and modifies the original specifications and drawings dated November 2, 2018, for Philip R. Smith Elementary School Phase 2 of 5: Site and Building Construction.

This Addendum Number One consists of 18 pages, plus 64 sheets of attachments, totaling 82 sheets.

SPECIFICATIONS

Item 1

SECTION 01 77 00 - CLOSEOUT PROCEDURES: At Article 1.6 "PROJECT RECORD DOCUMENTS" Paragraph C **ADD** new subparagraph 1. and sub-subparagraph to read as follows:

"1. PDF: At completion of Project and after completion of Record CAD Drawings, submit complete set of Record CAD Drawings as PDF's at full size, secured to prevent changes but which can be printed. Include all Record Drawings in one file and in the same order as in hard-copy set of Record Drawings. Provide fully bookmarked table of contents at beginning of document.

   a. Submit on digital media acceptable to Architect."

Item 2

SECTION 04 20 00 - UNIT MASONRY ASSEMBLIES:

a. At Article 2.2 CONCRETE MASONRY UNITS, **DELETE** Paragraph B in its entirety without substitution.

b. At Article 2.2 CONCRETE MASONRY UNITS Paragraph D **DELETE** subparagraph 6.2 in its entirety without substitution.

c. At Article 2.2 CONCRETE MASONRY UNITS Paragraph D **DELETE** subparagraph 7 in its entirety without substitution.

d. At Article 2.2 CONCRETE MASONRY UNITS **DELETE** Paragraph E in its entirety without substitution.

e. At Article 3.13 FLASHING, WEEP HOLES, AND VENTS Paragraph D.2 **DELETE** 32 inches and **REPLACE** with 24 inches.

Item 3

SECTION 04 72 00 - CAST STONE: At Article 2.1 "MANUFACTURERS" **DELETE** Paragraph A associated subparagraphs, and **REPLACE** with new Paragraph A and subparagraphs to read as follows:

"A. Basis of Design: The basis of design manufacturer for cast stone is MGA Cast Stone, Inc. Subject to compliance with requirements, provide products of the named manufacturer or comparable products of one of the following manufacturers:

1. Architectural Cast Stone, Inc.
2. Continental Cast Stone Manufacturing, Inc.
3. DuraStone.
4. Pineapple Grove Designs.
5. Plasticrete Architectural Concrete Products.
6. Reading Rock."

Item 4

SECTION 05 50 00 - METAL FABRICATIONS:

a. **DELETE** Article 2.10 TRENCH DRAIN FRAMES AND COVERS in its entirety without substitution.

b. **DELETE** Article 2.11 METAL FLOOR PLATE in its entirety without substitution.

c. **DELETE** Article 2.12 LADDERS and **REPLACE** with new Article 2.12 LADDERS AND SECURITY GATES as follows:

2.12 LADDERS AND LADDER SECURITY GATES

A. General: Fabricate ladders for locations shown, with dimensions, spacings, details, and anchorages as indicated. Comply with the following:

1, Ladders: Comply with ANSI A14.3 and OSHA 1910.27, and as specified in this Section.
2. Elevator pit ladders: Comply with ASME A17.1, and as specified in this Section.

B. Steel Ladders:

1. Siderails: Continuous, 1/2-by-2-1/2-inch steel flat bars, with eased edges, spaced 18 inches apart.
2. Bar Rungs: 3/4-inch- diameter steel bars, spaced 12 inches o.c.
3. Fit rungs in centerline of side rails; plug-weld and grind smooth on outer rail faces.
4. Support each ladder at top and bottom and not more than 60 inches o.c. with welded or bolted steel brackets. Size brackets to support design loads specified in ANSI A14.3.

5. Provide nonslip surfaces on top of each rung, either by coating rung with aluminum-oxide granules set in epoxy-resin adhesive or by using a type of manufactured rung filled with aluminum-oxide grout.
6. Galvanize all steel ladders to be installed at exterior locations, including brackets and fasteners.
7. Fabrication: Assemble by welding or riveting.

C. Ladder Security Gates:

1. Lockable ladder security gate constructed of sheet steel panel not less than 16 ga. thickness, with continuous piano hinge or not less than two butt hinges; hinges with non-removable pins and concealed when security gate is closed; gate lockable when closed with padlock (padlock furnished by Owner).

   a. Provide unit complete, ready for installation onto ladder.
   b. Size: Width as required to cover ladder stringers and rungs by not less than 6 feet in height.
   c. Finish: Hot dip galvanized, ASTM A123 G90.

2. Manufacturer: Subject to compliance with requirements, provide product of one of the following manufacturers:

   a. BlueWater Manufacturing; The Ladder Guard.
   b. Brock Grain Systems; Ladder Security Door.
   c. Tri Arc Manufacturing Co.; Ladder Guard.

d. **DELETE** Article 2.14 DOWNSPOUT NOZZLE in its entirety without substitution.

e. At Article 1.2 "SUMMARY" Paragraph A **DELETE** subparagraph 11 in its entirety without substitution.

Item 5

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK: At Article 2.8 "PLASTIC-LAMINATE COUNTERTOPS" **DELETE** Paragraph F, and **REPLACE** with new Paragraph F to read as follows; subparagraph 1 to remain unchanged:

"F. PVC edge banding, 3 mm thickness in width to exactly match thickness of shelf or countertop to be edged, color as selected by Architect from manufacturer's full range of colors and patterns."

Item 6

SECTION 07 17 16 - BENTONITE WATERPROOFING: **ADD** new Section 07 17 16 "Bentonite Waterproofing" consisting of 6 pages attached herewith to the Project Manual immediately following Section 06 64 13 "Fiberglass Reinforced Polyester Panels."

Item 7

SECTION 07 42 13 - METAL WALL PANELS: At Article 1.4 PERFORMANCE REQUIREMENTS Paragraph D **DELETE** subparagraph 1, and **REPLACE** with new Paragraph F to read as follows; subparagraph 1 to remain unchanged:

"1. Temperature Change (Range): 120 deg. F, ambient; 180 deg. F material surfaces."

Item 8

SECTION 07 54 19 - POLYVINL CHLORIDE (PVD) ROOFING: **DELETE** Article 3.7 WALKWAY INSTALLATION in its entirety without substitution.

Item 9

SECTION 07 72 00 - ROOF ACCESSORIES:

a. At Article 1.2 SUMMARY Paragraph A **DELETE** subparagraph 5 in its entirety without substitution.

b. At Article 1.2 SUMMARY **DELETE** Paragraph C in its entirety without substitution.

c. At Article 2.2 "ROOF HATCHES" **DELETE** Paragraph A associated subparagraphs, and **REPLACE** with new Paragraph A and subparagraphs to read as follows:

"A. Basis of Design: The basis of design for roof hatches is Bilco Company; Type F, 48 by 48 inches single-leaf access hatch for personnel and equipment access by ladder. Subject to compliance with requirements provide the named product or comparable products of one of the following:
1. Babcock-Davis Hatchways, Inc.
2. Milcor, Inc.
3. Nystrom Products Co.

d. **DELETE** Article 2.6 BAR TYPE SNOW GUARDS FOR STANDING SEAM METAL ROOF (ALTERNATE) in its entirety without substitution.

e. At Article 3.1 **DELETE** Paragraph G in its entirety without substitution.

Item 10

SECTION 07 92 00 - JOINT SEALANTS:

a. At Article 2.2 "ELASTOMERIC JOINT SEALANTS" **ADD** new Paragraph K and subparagraphs to read as follows:

K. Single-Component Pourable Neutral-Curing Silicone Sealant ES-6:

1. Products:

a. Dowsil; 890-SL.

b. GE Silicones (Momentive Performance Materials, Inc.); SilPruf LM SCS2700.
c. Pecora Corporation; 300 SL Pavement Sealant (Self Leveling).
d. Sika Corporation, Construction Products Division; SikaSil C990.
e. Tremco; 800 or 900SL.
f. Dowsil; SL Parking Structure Sealant.

2. Type and Grade: S (single component) and P (pourable).
3. Class: 100/50.
4. Uses Related to Exposure: NT and T (traffic).
5. Uses Related to Joint Substrates: M, A and O.

b. At Article 3.7 "JOINT SEALANT SCHEDULE" ADD new Paragraph I and subparagraphs to read as follows:

"I. Joint-Sealant Application JS-9:

1. Exterior horizontal nontraffic and traffic joints in cast-in-place concrete slabs.

a. Joint Sealant: Single-component pourable neutral-curing silicone sealant ES-1.
b. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors including manufacturer's standard colors, premium colors, and custom colors.

Item 11

SECTION 08 33 26 - OVERHEAD COILING GRILLES:

a. At Article 1.2 SUMMARY Paragraph A **DELETE** "electric motor operated overhead coiling grilles" and **REPLACE** with "manually operated overhead coiling grilles."

b. At Article 1.6 QUALITY ASSURANCE **DELETE** Paragraph C in its entirety without substitution.

b. At Article 2.2 GRILLE CURTAIN MATERIALS AND CONSTRUCTION Paragraph D **ADD** subparagraph 1 to read:

"1. Mount to face of wall as shown by Drawings."

b. At Article 2.3 HOODS AND ACCESSORIES **DELETE** Paragraph D in its entirety without substitution.

b. **DELETE** Article 2.5 ELECTRIC GRILL OPERATORS and **REPLACE** with new Article 2.5 to read as follows:

2.5 MANUAL GRILLE OPERATORS

A. Crank-Hoist Operator: Provide crank-hoist operator consisting of crank and crank gearbox, steel crank drive shaft, and gear-reduction unit. Size gears to require no

more than 35-lbf force to turn crank. Fabricate gearbox to be oil tight and completely enclose operating mechanism. Provide manufacturer's standard crank-locking device.

Item 12

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS:

a. At Article 1.2 SUMMARY Paragraph A, **DELETE** subparagraph 1 in its entirety without substitution.

b. At Article 2.1 "MANUFACTURERS" Paragraph A **DELETE** Paragraph A in its entirety without substitution.

Item 13

SECTION 08 44 13 - CONVENTIONALLY-GLAZED ALUMINUM CURTAIN WALLS:

a. At Article 1.2 SUMMARY Paragraph B, subparagraph 3, **DELETE** text that reads "and storefront systems installed with glazed aluminum curtain wall systems."

Item 14

SECTION 08 80 00 - GLAZING:

a. At Article 3.12 INSULATING GLASS SCHEDULE, Paragraph A, subparagraph 3, **DELETE** "Interspace Content: Air" and **REPLACE** with "Interspace Content: Argon."

b. At Article 3.12 INSULATING GLASS SCHEDULE, Paragraph D, subparagraph 4, **DELETE** "Interspace Content: Air" and **REPLACE** with "Interspace Content: Argon."

Item 15

SECTION 08 90 00 - LOUVERS: **DELETE** Section 08 90 00 LOUVERS in its entirety without substitution.

Item 16

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES: At Article 2.3 STEEL SUSPNDED CEILING AND SOFFIT FRAMING **DELETE** brackets; text should read "one of".

Item 17

SECTION 09 51 13 - ACOUSTICAL PANEL CEILINGS:

a. At Article 2.5 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILINGS ACT-1, ACT-2 **ADD** ACT-3, SAP-1

b. At Article 2.5 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILINGS ACT-1, ACT-2, ACT-3 **ADD** new Paragraph C to read:

"C. Install Acoustical Isolators specified in this Section at Acoustical Ceiling Type ACT-3.

c. **ADD** new Article 2.8 SUSPENDED WOOD FIBER ACOUSTIC PANELS TYPE SAP-1 to read as follows:

2.8 SUSPENDED WOOD FIBER ACOUSTIC PANELS TYPE SAP-1

A. Product: Tectum, Inc.; Tectum Shapes and Clouds.
B. Square-edged panels composed of wood fibers with inorganic hydraulic cement binder:
C. Classification: Provide panels complying with ASTM E 1264 for type, form and pattern as follows:

1. Type and Pattern: Type XIV, Form 1.
2. Pattern L (random swirl).

D. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
E. Edge Detail: Square.
F. NRC: 0.50.
G. Flame Spread: 0.
H. Thickness: 2 inches (51 mm) thick.
I. Color: Factory painted Custom Color.
J. Size: As shown by Drawings.

Item 18

SECTION 10 12 00 - BULLETIN BOARDS AND DISPLAY CASES: **DELETE** Section 10 12 00 BULLETIN BOARDS AND DISPLAY CASES in its entirety without substitution.

Item 19

SECTION 10 14 00 - SIGNS: At Article 2.2 MONUMENTAL SIGNS **DELETE** Paragraph A and subparagraphs 1 and 2 and **REPLACE** with new Paragraph A and subparagraphs to read as follows:

1. Manufacturer: Laurentano Sign Group or comparable product of one of the following:
   a. Gemini, Inc.
   b. Adams | Ahern.
   c. ARTfx Signs.

Item 20

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES: At Article 3.1 EXAMINATION **DELETE** Paragraph A in its entirety without substitution.

Item 21

SECTION 11 58 13 - KILNS:

a. At Article 2.2 KILN, Paragraph A, subparagraph 2, **DELETE** "Electrical Characteristics: 208 V 1 phase; 69 Amps; 14300 Watts " and **REPLACE** with "Electrical Characteristics: 208 V 3 phase; 31.7 Amps; 11000 Watts."

Item 22

SECTION 11 66 23 - GYMNASIUM EQUIPMENT:

a. At Article 1.4 SUBMITTALS Paragraph I **DELETE** brackets; text should read "and gymnasium operator"

b. **DELETE** Article 2.3 VOLLEYBALL EQUIPMENT in its entirety without substitution.

Item 23

SECTION 23 52 16 – CONDENSING BOILERS Article 3.2: **DELETE** Paragraph E and **REPLACE** with new Paragraph E as follows:

E. Training: Train Town of South Windsor's personnel on operation and maintenance of system.

1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
2. Provide minimum of two hours of training for two people.
3. Instructor: Manufacturer's training personnel.
4. Location: Town of South Windsor's offsite classroom facilities may be used.
5. Refer to Section 01 77 00 for other training requirements.

Item 24

SECTION 23 72 00 – DEDICATED OUTDOOR AIR UNITS Article 2.1: **DELETE** Paragraph O and **REPLACE** with new Paragraph O as follows:

O. Roof Curb:

1. Roof Curb: 18" gage galvanized steel with perimeter and factory installed 2" x 2" wood nailer; Insulated with 1" foil faced rigid board insulation. Curb height shall be 18 or 24 inches, as designated on the roof plans.
2. Curb construction shall match the slope of the building steel to allow level installation of the equipment without field installed shims. Provide shop drawings of curbs before fabrication.
3. Curb shall be supplied by equipment manufacturer and shipped in single piece ready for installation.

Item 25

SECTION 23 72 00 – DEDICATED OUTDOOR AIR UNITS Article 3.2: **DELETE** Paragraph A and **REPLACE** with new Paragraph A as follows:

A. Unit support:

1. Install roof mounted units on curb in accordance with roofing details shown on the Architectural drawings
2. Provide 2 layers of 1" rigid board insulation at the bottom of the curb. Cut required duct openings in insulation, and seal openings weather tight.

Item 26

SECTION 23 72 00 – DEDICATED OUTDOOR AIR UNITS Article 3.5: **DELETE** Paragraph C and **REPLACE** with new Paragraph C as follows:

C. Training: Train Town of South Windsor's personnel on operation and maintenance of DOAS system.

1. Provide minimum of six hours for two people.
2. Have operation and maintenance data prepared for review during training.
3. Refer to Section 01 77 00 for other training requirements.
4. Training will occur in the Town of South Windsor at a time and location to be determined.

Item 27

SECTION 23 74 13 – PACKAGED OUTDOOR CENTRAL STATION AIR HANDLING UNITS Article 2.4: **DELETE** Paragraph F and **REPLACE** with new Paragraph F as follows:

F. Roof Curb:

1. Roof Curb: 18" gage galvanized steel with perimeter and factory installed 2" x 2" wood nailer; Insulated with 1" foil faced rigid board insulation. Curb height shall be 18 or 24 inches, as designated on the roof plans.
2. Curb construction shall match the slope of the building steel to allow level installation of the equipment without field installed shims. Provide shop drawings of curbs before fabrication.
3. Curb shall be supplied by equipment manufacturer and shipped in single piece ready for installation.

Item 28

SECTION 23 74 13 – PACKAGED OUTDOOR CENTRAL STAION AIR HANDLING UNITS Article 3.2: **ADD** new Paragraph C as follows:

C. Unit support:

1. Install roof mounted units on curb in accordance with roofing details shown on the Architectural drawings
2. Provide 2 layers of 1" rigid board insulation at the bottom of the curb. Cut required duct openings in insulation, and seal openings weather tight.

Item 29

SECTION 23 74 13 – PACKAGED OUTDOOR CENTRAL STATION AIR HANDLING UNITS Article 3.4: **DELETE** Paragraph C and **REPLACE** with new Paragraph C as follows:

C. Training: Train Town of South Windsor's personnel on operation and maintenance of DOAS system.

1 Provide minimum of four hours for two people.
2. Have operation and maintenance data prepared for review during training.
3. Refer to Section 01 77 00 for other training requirements.
4. Training will occur in the Town of South Windsor at a time and location to be determined.

Item 30

SECTION 23 81 29 – VARIABLE REFRIGERANT VOLUME (VRV) HVAC SYSTEM Article 3.7: **DELETE** Paragraph E and **REPLACE** with new Paragraph E as follows:

E. Training: Train Town of South Windsor's personnel on operation and maintenance of system.

1 Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
2. Provide minimum of four hours for two people.
3. Refer to Section 01 77 00 for other training requirements.
4. Location: Town of South Windsor's offsite classroom facilities may be used.

Item 31

SECTION 32 16 13.13 – CONCRETE CURBS:

a. At Article 1.3 "SUMMARY" **ADD** Paragraph C as follows:

"C. The construction of new fiber reinforced extruded concrete curb or the replacement of existing concrete curb damaged or removed by construction under other items of work of this contract. Their construction shall be on standard asphalt binder course or permeable asphalt wearing course at the locations shown on the Contract Drawings or as ordered by the Engineer and in accordance with the Contract Drawings and these specifications."

b. At Article 1.4 "SUBMITTALS" **ADD** Paragraph C as follows:

"C. Submit manufacturer's documentation and product data sheets for fiber reinforcement and asphaltic tack coat for extruded concrete curb mix and placement."

c. At Article 1.5 "REFERENCE STANDARDS" **ADD** to list of references:

"C1116/C Standard Specification for Fiber-Reinforced Concrete
C-881 Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete"

d. At Article 2 "PRODUCTS" **ADD** Paragraphs H and I as follows:

"H. Fiber Reinforcement for Extruded Concrete Curbing: Shall be polypropylene fibers comply with provisions of ASTM C1116 Type III fibers and shall be manufactured specifically for reinforcement of concrete. Blend with concrete mix at rates and procedures as described by manufacturer. Acceptable products include:

1. Master Fiber M70 by BASF Corporation; www.master-builders-solutions.basf.su
2. Fibermesh 300-e3 by Propex Global; www.fibermesh.com
3. FiberForce 150 by ABC Polymer Industries; www.abcpolymerindustries.com

I. Tack Coat for Adhering Extruded Curb to Asphalt Pavement: Shall be high strength, extended pot life, epoxy bonding/grouting adhesive compliant with ASTM C-881, Types I and II. Apply at rates and procedures as recommended by manufacturer. Acceptable products include:

1. Sikadur – 32 Hi-Mod LPL
2. Concrete Paste PL by BASF Construction Chemicals, LLC; www.buildingsystems.BASF.com
3. EUCO #452 Epoxy System by the Euclid Chemical Company; www.euclidchemical.com"

Item 32

SECTION 27 10 00 – STRUCTURED CABLING ARTICLE 2.16 WORK AREA OUTLETS: **ADD** new Paragraph L as follows:

L. Provide Modular Plug Termination Links (MPTL) within backbox for all of the following field devices:

1. Intercom Master Stations (IMS)
2. Video/Audio Entrance Station (VES)

Item 33

SECTION 28 13 33 - AUDIO-VIDEO INTERCOM: **REMOVE** Section 28 13 33 - AUDIO-VIDEO INTERCOM as issued for bids and **REPLACE** with Section 28 13 33 - AUDIO-VIDEO INTERCOM consisting of 7 pages attached to and issued with this Addendum.

Item 34

SECTION 28 20 00 - VIDEO SURVEILLANCE: **REMOVE** Section 28 20 00 - VIDEO SURVEILLANCE as issued for bids and **REPLACE** with Section 28 20 00 - VIDEO SURVEILLANCE consisting of 29 pages attached to and issued with this Addendum.

DRAWINGS

Item 35

DRAWING C2.1 – SITE PLAN ENLARGEMENT - SOUTH: **REMOVE** Drawing C2.1 – SITE PLAN ENLARGEMENT - SOUTH dated February 5, 2019 issued for bids and **REPLACE** with

Drawing C2.1 – SITE PLAN ENLARGEMENT - SOUTH revised February 15, 2019 attached herewith and reissued with this Addendum.

Item 36

DRAWING C5.1 – SITE DETAILS: **REMOVE** Drawing C5.1 – SITE DETAILS dated February 5, 2019 issued for bids and **REPLACE** with Drawing C5.1 – SITE DETAILS revised February 15, 2019 attached herewith and reissued with this Addendum.

Item 37

DRAWING C5.3 – SITE UTILITY DETAILS: **REMOVE** Drawing C5.5 – SITE UTILITY DETAILS dated February 5, 2019 issued for bids and **REPLACE** with Drawing C5.5 – SITE UTILITY DETAILS revised February 15, 2019 attached herewith and reissued with this Addendum.

Item 38

DRAWING C5.7 – SITE DETAILS: **REMOVE** Drawing C5.7 – SITE DETAILS dated February 5, 2019 issued for bids and **REPLACE** with Drawing C5.7 – SITE DETAILS dated February 15, 2019 attached herewith and issued with this Addendum.

Item 39

A1 SERIES FLOOR PLANS - MULTIPLE SHEETS: **REVISE** as follows:

REVISE graphic for Sorter Cabinet within Grades 1-5 Classrooms to read as millwork using the millwork hatch

Item 40

DRAWING A1.1 - PARTIAL FIRST FLOOR CONSTRUCTION PLAN - NORTH AND WEST: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** tag to marker wall / tack wall at teaching wall that was missing in Rooms 104 & 131

b. **REVISE** marker wall / tack wall tag types to coordinate with specifications

c. **ADD** note at east wall of Room 133A:

"ALTERNATE 2 NOTE: RECESSED MANIFOLD BOX MOUNTED 42" A.F.F., REFER TO MECH. DWGS"

Item 41

DRAWING A1.2 - PARTIAL FIRST FLOOR CONSTRUCTION PLAN - WEST: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** notation and hatch to indicate cmu walls with cores to be grouted solid at the Platform and Practice Room.

b. **REVISE** marker wall / tack wall tag types to coordinate with specifications

c. **REVISE** partition between Rooms 104B & 104C to Type S6A

d. **ADD** note to read as follows:

"RECESSED MANIFOLD BOX MOUNTED 42" A.F.F., REFER TO MECH. DWGS" to modified partition.

Item 42

DRAWING A1.3 - PARTIAL SECOND FLOOR AND LOWER ROOF CONSTRUCTION PLAN: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** bar type snow guard at West and South Kindergarten roof,

b. **REVISE** marker wall / tack wall tag types to coordinate with specifications

c. **REVISE** bar type snow guard from 2 rows to 1 row typically,

d. **ADD** tapered insulation plans

Item 43

DRAWING A1.4 - PARTIAL LOWER ROOF CONSTRUCTION PLAN - WEST: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** extent of protectived overlay membrane at KEF-1,

b. **ADD** tapered insulation plan at EPDM roof

c. **REVISE** bar type snow guard from 2 rows to 1 row

Item 44

DRAWING A1.5 - PARTIAL UPPER ROOF CONSTRUCTION PLANS: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** tapered insulation plan at EPDM roof,

b. **ADD** snow guard to northwest roof slope

Item 45

DRAWING A1.6 - ALTERNATE 1 - ADDED CLASSROOMS PLANS AND CEILING PLAN

a. **ADD** tapered insulation plans,

b. **REVISE** marker wall / tack wall tag types to coordinate with specifications

c. **ADD** bar type snow guard to west roof slope

Item 46

DRAWING A1.7 - ALTERNATE 1 - ADDED CLASSROOMS ELEVATIONS: **REVISE** as follows:

a. **REVISE** detail 5 note "?" to "WALL BASE",

b. **REVISE** detail 7 note "?" to "PNTD GWB"

c. **ADD** notation "FLAG HOLDER" noting flag holder

Item 47

DRAWING A11.1 PARTIAL FIRST FLOOR CEILING PLANS - NORTH AND SOUTH: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

REVISE wood fiber ceilings to read as follows:

SUSPENDED WOOD FIBER ACOUSTIC PANELS TYPE SAP-1

Item 48

DRAWING A11.2 - PARTIAL FIRST FLOOR CEILING PLAN - WEST: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

ADD notation for motorized window shades at Gymnasium clerestory windows

Item 49

DRAWING A4.9- WALL SECTIONS: **REVISE** as follows:

REVISE note from "RIBBED METAL SCREEN WALL PANEL FACE FASTENED THROUGH PANEL TO FRAMING" to read as follows:

"EXPOSED FASTENER LAP SEAM WALL PANEL SCREEN WALL FASTENED TO STEEL BEAMS AND COLUMNS"

to coordinate with specifications

Item 50

DRAWING A5.7 - EXTERIOR DETAILS: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

ADD information and notes to canopy rake and eave details.

Item 51

DRAWING A5.9- ROOF DETAILS: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

ADD roof detail at elevator overrun

Item 52

DRAWING A6.1 - DOOR SCHEDULE AND TYPES: **REVISE** as follows:

a. **ADD** notation to Door 111.2:

CHAIN-HOIST OPERATOR",

b. **ADD** notation to Door 111A.2

"PUSH-UP OPERATION"

Item 53

DRAWING A6.2 - FRAME TYPES: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** notation to clarify corner mullion types at Frame Types F54 & F55.

"SSG 90° OUTSIDE CORNER"

b. **REVISE** frame types from aluminum storefront system to aluminum curtain wall frames

Item 54

DRAWING A6.3 - FRAME TYPES: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** notation to clarify corner mullion types at Frame Types F48 & F50.

"SSG 90° OUTSIDE CORNER"

b. **REVISE** frame types from aluminum storefront system to aluminum curtain wall frames

Item 55

DRAWING A8.3 - ENLARGED GYMNASIUM AND PLATFORM PLAN: **REVISE** as follows:

a. **ADD** notation and hatch to indicate cmu walls with cores to be grouted solid at the Platform and Practice Room.

b. **REVISE** note that reads "BASKETBALL BACKBOARD, 2 END COURT BACKBOARDS." to read as follows:

"END COURT BACKBOARD:

- FORWARD FOLDING
- GLASS BACKBOARD
- TYPICAL OF (2) END COURT BACKBOARDS"

c. **REVISE** note that reads "BASKETBALL BACKBOARD, 4 SIDE COURT BACKBOARDS" to read as follows:

"SIDE COURT BACKBOARD:

- SIDE FOLDING
- FIBERGLASS BACKBOARD
- TYPICAL OF (4) SIDE COURT BACKBOARDS"

Item 56

DRAWING A8.5 - INTERIOR ELEVATIONS: **REVISE** as follows:

DELETE note that reads:

"RECESSED MANIFOLD BOX, REFER TO MECHANICAL DRAWINGS"

Item 57

DRAWING A8.7 - INTERIOR ELEVATIONS: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

a. **ADD** notation at detail 5 to operable partition motor access panel above proscenium opening:

"ACCESS PANEL, COORDINATE LOCATION IN FIELD WITH OPERABLE PARTITION MOTOR"

b. **ADD** notation at detail 14 for downdraft vent at the kiln to coordinate with specifications

Item 58

DRAWING A8.8 - INTERIOR ELEVATIONS: **REVISE** as follows:

DELETE projector and screen symbol

Item 59

DRAWING A8.13 - INTERIOR ELEVATIONS: **REMOVE** drawing as Issued for Bids and **REPLACE** with drawing attached to this Addendum with the following revisions:

ADD missing marker board, tackboards and flag holder

Item 60

DRAWING A9.2 - INTERIOR DETAILS: **REVISE** as follows:

ADD edge of slab at CMU wall detail to coordinate perimeter rigid insulation and sealant detail with structural drawings

Item 61

MULTIPLE ARCHITECTURAL DRAWINGS: **REVISE** as follows:

REVISE note "PIPE STYLE SNOW FENCE" to "BAR TYPE SNOW GUARD" to coordinate with specifications

Item 62

ALL ARCHITECTURAL FLOOR PLANS: **REVISE** as follows:

a. **REVISE** marker wall abbreviation to "MW" and tack wall abbreviation to "TW" to coordinate with specifications,

b. **REVISE** notations "WHITEBOARD" to "MARKER WALL" and "TACKBOARD" to "TACK WALL" to coordinate with specifications

Item 63

DRAWING FS-1.5.1 - FOOD SERVICE EQUIPMENT LIFE SAFETY AND SPECIAL CONDITIONS PLAN:

ADD manual pull station as shown by Drawing reissued with this Addendum.

Item 64

DRAWING E0.0 – ELECTRICAL LEGENDS: "Power connection to Electric Water Cooler"

CHANGE symbol subscript from "HD" to "EWC."

Item 65

DRAWING E1.1 - ELECTRICAL LIGHTING FIRST FLOOR PLAN – NORTH AND SOUTH:

Corridor 191: **REMOVE** Exit Sign EX2 adjacent to door S101.1 (at stair S101.)

Item 66

DRAWING E1.2 - ELECTRICAL LIGHTING FIRST FLOOR PLAN – WEST:

Corridor 183: **REMOVE** Exit Sign EX1 adjacent to door 186.1.

Item 67

DRAWING E2.2 - ELECTRICAL POWER FIRST FLOOR PLAN - WEST:

Main Electrical 113: Provide a 2" GRS Conduit stubbed through roof and capped, at west wall, for future photovoltaic system conductors. Provide space in panel "MDP" for a future photovoltaic system circuit breaker. Leave space on west wall (near transformer T-1) for future photovoltaic system disconnect.

Item 68

DRAWING E2.2 - ELECTRICAL POWER FIRST FLOOR PLAN - WEST:

Platform 118: Theatrical Dimming Cabinet feeder shall be 4#6+#10G~1"C.

Item 69

DRAWING E2.2 - ELECTRICAL POWER FIRST FLOOR PLAN - WEST:

Kiln Rm 119B: **REMOVE** NEMA 15-50R receptacle. Provide outlet box for hard-wired connection to Kiln.

Item 70

DRAWING E6.2 - ELECTRICAL RISER DIAGRAM:

a. Detail 2/E6.2: All Theatrical Lighting units shall be LED type.

b. Type 'TH1' shall be 140 watt, RGBW LED spot, Strand #PLZS1MKII-1834-03-GR or equal.

c. Type 'TH2' shall be 140 watt RGBW LED Fresnel, Strand #PLFR1MKII-03-GR or equal.

d. Type 'TH3' shall be 100 watt RGBA LED wash light, Altman #SSCYC100-RGBA-B/SS-CYC100-YOKEB or equal.

Item 71

DRAWING T101A - PARTIAL FIRST FLOOR PLAN - NORTH AND SOUTH: At Math Intervention 128 **RELOCATE** symbol PDC to the south wall.

END OF ADDENDUM NUMBER ONE

SECTION 07 17 16 - BENTONITE WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes

1. Geotextile/bentonite sheet waterproofing.
2. Bentonite joint seals and waterstops.

B. Related Sections include the following:

1. Division 3 Section “Cast in Place Concrete” for concrete work related to placing bentonite joint seals and waterstops.
2. Division 7 Section "Joint Sealants" for elastomeric sealants.
3. Division 31 for excavation and earthwork.

1.3 PERFORMANCE REQUIREMENTS

A. Provide waterproofing that prevents the passage of water according to the following criteria:

1. Permeability: 5 x 10-9 cm/sec. according to ASTM D 5084.
2. Grab Tensile Strength: 95 lbf (422 N) according to ASTM D 4632.
3. Elongation: 75 percent according to ASTM D 4632.
4. Puncture Resistance: 120 psi (828 kPa) according to ASTM D 4833.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include product specifications and manufacturer's written installation instructions.

B. Connecticut High Performance Building Submittals:

1. Recycled Content: Provide data showing postconsumer and preconsumer recycled materials content of materials and fabricated items provided for this project, stated as a percentage of the materials included in these items or materials provided as part of the Work of this Section.
2. Regional Materials: Provide data showing materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

C. Shop Drawings: Show installation details for interface with other work.

D. Samples: For each of the following products, in sizes indicated:

1. Waterproofing: 6 inches square.
2. Flexible Flashing Membrane: 6 inches square.
3. Protection Board: 6 inches square.
4. Drainage Mat: 6 inches square.

E. Material Certificates: For each type of bentonite waterproofing, signed by manufacturers.

F. Preconstruction Test Reports: For water samples taken at Project site along with recommendations resulting from these tests.

G. Field quality-control test reports.

H. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for bentonite waterproofing.

I. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain bentonite waterproofing system through one source from a single manufacturer. Obtain accessory products used with bentonite waterproofing from sources acceptable to bentonite waterproofing manufacturer.

B. Preconstruction Testing: Engage a qualified independent testing agency to test water for compliance with requirements.

1. Obtain water samples from Project site at approximate locations where waterproofing will be installed and test for acids, alkalis, brine, or other contaminants that may inhibit performance of waterproofing materials.
2. Comply with manufacturer's written instructions for testing.

C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original unopened and undamaged containers.

B. Store materials in a dry, well-ventilated space.

C. Remove and replace bentonite materials that have been prematurely exposed to moisture.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit bentonite waterproofing to be installed according to manufacturers' written instructions and warranty requirements.

1. Do not apply waterproofing materials to surfaces where ice or frost is visible. Do not apply bentonite waterproofing materials in areas with standing water.
2. Placing of bentonite clay products in panel or composite form on damp surfaces is allowed if approved in writing by manufacturer.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer[**and Installer**] agrees to repair or replace components of bentonite waterproofing system that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Water penetrating the building or structure resulting from substrate cracking of up to 1/8 inch.
b. Deteriorated or displaced waterproofing materials.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Granular Bentonite: Sodium bentonite clay containing a minimum of 90 percent montmorillonite (hydrated aluminum silicate), with a minimum of 90 percent passing a No. 20 (0.85-mm) sieve.

B. Bentonite Mastic: Trowelable consistency, bentonite compound, specifically formulated for application at joints and penetrations.

C. Granular Bentonite Tubes: Manufacturer's standard 2-inch- (50-mm-) diameter, water-soluble tube containing approximately 1.5 lb/ft. (2.2 kg/m) of bentonite; hermetically sealed; designed specifically for placing on wall footings at line of joint with exterior base of wall.

D. Preformed Waterstop: Flexible strip of bentonite waterproofing compound in cartridge or coil form; designed specifically for vertical and horizontal joints in concrete construction.

E. Bentonite Grout: High-solids bentonite fluid mixture formulated to be injected to stop leaks in existing below-grade structures.

2.2 GEOTEXTILE/BENTONITE SHEETS

A. Geotextile/Bentonite Waterproofing: Minimum of 1.0 lb/sq. ft. (5 kg/sq. m) of bentonite clay granules between 2 layers of geotextile polypropylene fabric, one woven and one nonwoven, needlepunched and heat fused together.

1. Basis of Design: The basis of design for geotextile/bentonite waterproofing is Carlisle Coatings & Waterproofing Inc.; MiraCLAY. Subject to compliance with requirements provide the named product or comparable products of one of the following manufacturers:

a. CETCO.
b. Tremco.

2.3 INSTALLATION ACCESSORIES

A. Molded-Sheet Drainage Panels: Prefabricated, composite drainage panels, manufactured with a permeable geotextile facing laminated to a molded-plastic, three-dimensional sheet drainage core.

1. Basis of Design: The basis of design for molded sheet drainage panels is Carlisle Coatings & Waterproofing Inc.; MiraDRAIN 8000. Subject to compliance with requirements provide the named product or comparable products of one of the following manufacturers:

a. CETCO.
b. Tremco.

B. Termination Bar: Extruded-aluminum or formed-stainless-steel bars with upper flange to receive sealant.

1. Recycled Content: Minimum 5 percent post-consumer recycled content, or minimum 20 percent pre-consumer recycled content at contractor’s option.

C. Plastic Protection Sheets: Polyethylene sheeting complying with ASTM D 4397; thickness as recommended in writing by waterproofing manufacturer to suit application but at least 6 mils (0.15 mm) thick.

D. Fasteners: Case-hardened nails or hardened-steel, powder-actuated fasteners. Depending on manufacturer's written requirements, provide 1/2- or 1-inch- (13- or 25-mm-) diameter washers under fastener heads.

E. Sealants: As recommended in writing by waterproofing manufacturer. Comply with requirements specified in Division 7 Section "Joint Sealants."

F. Tapes: As recommended in writing by waterproofing manufacturer for joints between sheets or panels.

G. Adhesive: Water-based adhesive used to secure membrane to both vertical and horizontal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrate preparations affecting performance of bentonite waterproofing.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of bentonite waterproofing.
2. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Verify that substrate is complete and that all work that will penetrate waterproofing is complete and rigidly installed. Verify locations of waterproofing termination.

3.2 PREPARATION

A. Coordinate work in the vicinity of waterproofing to ensure proper conditions for installing the waterproofing system and to prevent damage to waterproofing after installation.

B. Formed Concrete Surfaces: Remove fins and projections. Fill voids, rock pockets, form-tie holes, and other defects with bentonite mastic or cementitious patching material according to manufacturer's written instructions.

C. Excavation Support and Protection or Stable Excavation: If water is seeping, use plastic sheets or other suitable means to prevent wetting the bentonite waterproofing. Fill minor gaps and spaces 1/8 inch wide or wider with wood, metal, concrete, or other appropriate filling material. Cover or fill large voids and crevices with cement mortar according to manufacturer's written instructions.

3.3 INSTALLATION, GENERAL

A. Install waterproofing and accessories according to manufacturer's written instructions, standard details, and recommended practices.

1. Apply linear joint-sealing tubes, bentonite mastic, or both at changes of plane, construction joints in substrate, projections, and penetrations.

B. Static Construction Joints: Protect construction joints with bentonite preformed waterstop flexible strips. Either place concrete directly over flexible strips or press strips into preformed cavities. Comply with manufacturer's written instructions where joint waterproofing is not otherwise indicated.

C. Apply granular bentonite continuously at base of wall waterproofing (on footing, against wall) according to manufacturer's written instructions.

D. Protect waterproofing from damage and wetting before and during subsequent construction operations. Repair punctures, tears, and cuts according to manufacturer's written instructions.

E. Apply sealants to comply with requirements specified in Division 7 Section "Joint Sealants" and with manufacturer's written instructions.

SECTION 28 13 33 – AUDIO/VIDEO INTERCOM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Refer to Section 27 0500 COMMON WORK RESULTS FOR DIVISION 27 AND 28 for additional PART 1 - GENERAL requirements.
   1. Many of the PART 1 - GENERAL requirements are common to most of the individual DIVISION 27 and DIVISION 28 Sections in these Contract Documents.
      a. Refer to Section 27 0500 for the additional common PART 1 - GENERAL requirements included in this project.
   2. Provide the following PART 1 - GENERAL requirements detailed in Section 27 0500 for this specification Section unless the DIVISION 27 and DIVISION 28 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 1 - GENERAL Section:
      a. PART 1 - GENERAL
         1) 1.1 RELATED DOCUMENTS
         2) 1.2 SCOPE OF WORK
         3) 1.3 RESPONSIBILITIES, COOPERATION AND COORDINATION WITH OTHER TRADES
         4) 1.4 COORDINATION
         5) 1.5 REGULATIONS AND CODE COMPLIANCE
         6) 1.6 SAFETY AND HEALTH REQUIREMENT
         7) 1.7 DEFINITIONS
         8) 1.8 DRAWINGS AND SPECIFICATIONS
         9) 1.9 EXAMINATION OF PROJECT SITE
         10) 1.10 CONFORMITY AND COMPATIBILITY
         11) 1.11 PROJECT MANAGEMENT
         12) 1.12 WORKMANSHIP
         13) 1.13 PERMITS, LICENSES, INSPECTIONS AND FEES
         14) 1.14 PERIODIC FIELD OBSERVATION REPORTS
         15) 1.15 INSPECTION AND TESTS
         16) 1.16 SUBSTITUTIONS
         17) 1.17 DELIVER, STORAGE, HANDLING AND STAGING
         18) 1.18 TRAINING
         19) 1.19 QUALIFICATIONS
         20) 1.20 PERFORMANCE REQUIREMENTS
         21) 1.21 SEISMIC REQUIREMENTS
         22) 1.22 SUBMITTALS
         23) 1.23 CLOSEOUT SUBMITTALS
         24) 1.24 QUALITY ASSURANCE
         25) 1.25 MATERIAL AND EQUIPMENT STANDARDS
         26) 1.26 SEQUENCING AND SCHEDULE
         27) 1.27 FINAL ACCEPTANCE AND WORK CLOSEOUT

28) 1.28 WARRANTY
29) 1.29 MAINTENANCE
30) 1.30 SCHEDULE OF VALUES
31) 1.31 PROJECT CONDITIONS
32) 1.32 PROTECTION OF WORK AND PROPERTY
33) 1.33 SOFTWARE SERVICE AGREEMENT

B. In addition, provide all the following PART 1 - GENERAL requirements included within this specification Section.

C. Drawings and general provisions of the Contract, including General and Supplementary Conditions and DIVISION 01 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

A. Work includes, but is not limited to the following:
1. Exterior Door Audio/Video Intercom System.
   a. Live Audio and Video display/control.
   b. Digital Video Recorder/NVR Integration.
   c. Door Access Control of Electronic Lock

B. System Description
1. IP Network Compatible Video Intercom System: A network-based communication and security system featuring video entry security, internal communication, emergency stations, and paging. All units and app in the systems shall be able to unlock doors remotely on a network, assist onsite visitors from an offsite location, broadcast emergency announcements, and communicate using a PoE network.
   a. Power Source: Power over Ethernet (802.3af).
   b. Network Interface: 10 BASE-T / 100 BASE-TX Ethernet (RJ-45).
   c. Network Protocols: IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, MJPEG, RTSP, RTP, RTCP, IGMP, MLD, SMTP, DHCP, NTP, DNS.
   d. Bandwidth Usage:
      1) G.711: 64Kbps x 2 per video call.
      2) 64Kbps per monitor.
      3) H.264: 24Kbps ~ 2,048Kbps.
   e. Communication: Hands-free (VOX), push-to-talk (simplex), or handset (full-duplex).
   f. Video Display: 7 inch color LCD.
   g. Camera: Type:
      1) 1/3 inch color CMOS. 1.23 Megapixels.
      2) View Area at 0 degree camera angle mounted at 4 feet 11 inches (1500 mm) AFF: 2 feet 3 inches (700 mm) vertical x 3 feet 9 inch (1150 mm) horizontal at 19 inches (500 mm).
   h. Video Stream: ONVIF Profile S.
   i. Door Release: Programmable Form C dry contact, 24V AC/ DC, 500mA (use RY-24L for larger contact rating, which requires 24V DC power supply) or use RY-IP44 with 4 multipurpose relays.
   j. Wire Type: CAT-5e or CAT-6.

k. Distance:
   1) Any station to Network Node: 330 feet (100 meters).

PART 2 - PRODUCTS

2.1 REFER TO SECTION 270500 COMMON WORK RESULTS FOR DIVISION 27 AND 28

A. Refer to Section 27 0500 COMMON WORK RESULTS FOR DIVISION 27 AND 28 for additional PART 2 – PRODUCTS requirements
   1. Many of the PART 2 – PRODUCTS requirements are common to most of the individual DIVISION 27 and DIVISION 28 Sections in these Contract Documents.
      a. Refer to Section 27 0500 for the additional common PART 2 – PRODUCTS requirements included in this project.
   2. Provide the following PART 2 – PRODUCTS requirements detailed in Section 27 0500 for this specification Section unless the DIVISION 27 and DIVISION 28 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 2 – PRODUCTS Section:
      a. PART 2 – PRODUCTS
         1) 2.1 EQUIPMENT AND MATERIALS MINIMUM REQUIREMENTS
         2) 2.2 SLEEVES FOR RACEWAYS AND CABLES
         3) 2.3 SLEEVES AND SEALS
         4) 2.4 GROUT
         5) 2.5 FACTORY ASSEMBLED PRODUCTS
         6) 2.6 COMPATIBILITY OF RELATED EQUIPMENT
         7) 2.7 SPECIAL TOOLS AND KITS
         8) 2.8 FIRESTOPS AND PENETRATION SEAL MATERIALS
         9) 2.9 ANCHORING MATERIALS AND SUPPORTS
         10) 2.10 GROUNDING AND BONDING MATERIALS
         11) 2.11 SURGE AND LIGHTNING PROTECTION FOR OUTDOOR & UNDERGROUND CABLES (IF APPLICABLE)
         12) 2.12 SURGE PROTECTED POWER STRIP
         13) 2.13 EQUIPMENT CABINETS

B. In addition, provide all the following PART 2 – PRODUCTS requirements included within this specification Section.

2.2 MANUFACTURER

A. Subject to compliance with requirements, provide available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Aiphone Corporation

B. Provide martials , software, quantities , training per contract documents and as required for a completely operational system

2.3 AIPHONE EXTERIOR DOOR ACCESS, INTERCOM AND VIDEO CONTROL SYSTEM

A. IP Video Intercom System: IX Series Intercom System as manufactured by Aiphone Corporation.

B. Audio Video Door Stations:
1. Model IX-DVF (Video Door Station - Flush Mount - Hands Free).

C. Provide Selective Door/Gate Release.

D. Provide Audio/video streaming via ONVIF Profile S.

E. Provide ONVIF Profile S camera input (max 500).

F. Provide Contact input at door station.

2.4 FUNCTIONAL COMPONENTS:

A. Functional Components: As indicated on the drawings or as required to complete system.
1. Video Master Station Series IX-MV7:
2. Model IX-MV7-HB (Master Station - Black w/Handset).
   a. Obtain color approval from Architect/Owner prior to ordering.
3. Model IX-MV7-HW (Master Station - White w/Handset).
   a. Obtain color approval from Architect/Owner prior to ordering.
4. An IP addressable video master station with a 7 inch color LCD monitor. It can be wall or desk mounted (desk stand included). The IX-MV7 offers handset (duplex) and hands-free (VOX/PTT) communication and call up to 500 other IX stations. It connects directly to a network using CAT-5e/6 cable. This station requires a 802.3af compliant Power-over-Ethernet network.

B. IXW-MA IP Programmable Relay Adaptor: Multi-purpose adaptor - PoE - screen only. For Moble App to answer door stations on iPhones or Androids.

C. RY-IP44 IP Programmable Relay Adaptor:
1. 4 contact inputs and 4 relay outputs (compatible with the IX Series, IS-IP Series, and IPW-1A only). Provide as required for Door Release and Mobile Apps.

D. Stainless Steel Enclosure Model SBX-IDVF:
1. Provide for all Flush Mounted Audio Video Door Stations.
2. 18-Guage Stainless Steel Surface Mount Box for IS-SS/IS-DVF/IS-IPDVF/IX-DF(SS)/IX-DF-HID/RP10 designed for surface mounting door stations.
3. Size: 10-7/16 inches x 5-15/16 inches x 3-5/16 inches (top); 2-5/16 inches (bottom) (265 mm x 151 mm x 84 mm (top); 59 mm (bottom).
4. Weather resistant.
5. Vandal-resistant.
6. Inside space for cabling.
7. Mounts to flat wall surface.
8. Opening at bottom for drainage.

PART 3 - PRODUCTS

3.1 REFER TO SECTION 270500 COMMON WORK RESULTS FOR DIVISION 27 AND 28

A. Refer to Section 27 0500 COMMON WORK RESULTS FOR DIVISION 27 AND 28 for additional PART 3 – EXECUTION requirements
   1. Many of the PART 3 – EXECUTION requirements are common to most of the individual DIVISION 27 and DIVISION 28 Sections in these Contract Documents.
      a. Refer to Section 27 0500 for the additional common PART 3 – EXECUTION requirements included in this project.
   2. Provide the following PART 3 – EXECUTION requirements detailed in Section 27 0500 for this specification Section unless the DIVISION 27 and DIVISION 28 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 3 – EXECUTION Section:
      a. PART 3 - EXECUTION
         1) 3.1 GENERAL INSTALLATION REQUIREMENTS
         2) 3.2 INTEGRATOR/INSTALLER
         3) 3.3 CONFORMITY AND COMPATIBILITY PRIOR TO INSTALLATION
         4) 3.4 WORKMANSHIP
         5) 3.5 WIRING METHODS
         6) 3.6 INSTALLATION OF CONDUCTORS AND CABLES
         7) 3.7 CONNECTIONS
         8) 3.8 POWER AND CONTROL-CIRCUIT CONDUCTORS
         9) 3.9 INSTALLATION OF HANGERS AND SUPPORTS
         10) 3.10 CUTTING AND PATCHING
         11) 3.11 CONCEALMENT
         12) 3.12 EQUIPMENT MODIFICATION
         13) 3.13 SLEEVE AND SLEEVE SEAL INSTALLATION FOR PENETRATIONS
         14) 3.14 FIRESTOPS AND PENETRATION SEALS
         15) 3.15 ANCHORING METHODS
         16) 3.16 GROUNDING AND BONDING
         17) 3.17 EQUIPMENT RACKS, CABINETS AND BRACKETS
         18) 3.18 PROTECTION
         19) 3.19 IDENTIFICATION
         20) 3.20 FIELD QUALITY CONTROL
         21) 3.21 CLEANING
         22) 3.22 DEMONSTRATION
         23) 3.23 PROJECT OWNER COORDINATION
         24) 3.24 ADJUSTMENTS

B. In addition, provide all the following PART 3 – EXECUTION requirements included within this specification Section.

3.2 EXAMINATION

A. Examine areas to receive video security communication system.

B. Notify Architect of conditions that would adversely affect installation or subsequent use.

C. Do not begin installation until unacceptable conditions are corrected.

3.3 PREPARATION

A. Verify the following compliance before starting installation.
   1. The unit turns inoperative during power failure.
   2. Keep the intercom wires at least 1 foot (30 cm) away from strong electrical wiring (AC 100-240 V) including, in particular, wiring for inverter electrical appliances. Noise and malfunction could result.
   3. If a strong light shines on the main unit screen, the picture may turn white or only silhouettes will be visible.
   4. Other manufacturer's devices (such as sensor, detectors, door releases) used with this system, comply with the manufacturer's installation requirements.
   5. The LCD panel is manufactured with very high precision techniques, inevitably will have a very small portion of its picture elements always lit or not lit at all. This is not considered a unit malfunction. Please be aware of this in advance.

3.4 INSTALLATION

A. Install video security communication system in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Mount equipment plumb, level, square, and secure.

C. Install video security communication system in accordance with manufacturer's instructions at locations indicated on the Drawings.

D. Mount equipment plumb, level, square, and secure.

E. (By Others) Data Cabling: Category 6A Plenum rated cabling shall be furnished and installed by other trades and is not required as part of this bid specification.

F. Provide additional cabling as required for a completely operational system.

3.5 DEMONSTRATION AND TRAINING

A. Demonstration:

   1. Demonstrate that integrated security and communication system functions properly.

2. Perform demonstration at final system inspection by qualified representative of manufacturer.

END OF Section 28 13 33

SECTION 28 20 00 VIDEO SURVEILLANCE SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Refer to SECTION 27 0500 COMMON WORK RESULTS FOR DIVISION 27 0000 AND 28 0000 for additional PART 1 - GENERAL requirements.

1. Many of the PART 1 - GENERAL requirements are common to most of the individual Division 27 0000 and Division 28 0000 SECTIONS in these Contract Documents.

    a. Refer to SECTION 27 0500 for the additional common PART 1 - GENERAL requirements included in this project.

2. Provide the following PART 1 - GENERAL requirements detailed in Section 27 0500 for this specification section unless the Division 27 0000 and Division 28 0000 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 1 - GENERAL Section:

    a. PART 1 - GENERAL

        1) 1.1 RELATED DOCUMENTS
        2) 1.2 SCOPE OF WORK
        3) 1.3 RESPONSIBILITIES, COOPERATION AND COORDINATION WITH OTHER TRADES
        4) 1.4 COORDINATION
        5) 1.5 REGULATIONS AND CODE COMPLIANCE
        6) 1.6 SAFETY AND HEALTH REQUIREMENT
        7) 1.7 DEFINITIONS
        8) 1.8 DRAWINGS AND SPECIFICATIONS
        9) 1.9 EXAMINATION OF PROJECT SITE
        10) 1.10 CONFORMITY AND COMPATIBILITY
        11) 1.11 PROJECT MANAGEMENT
        12) 1.12 WORKMANSHIP
        13) 1.13 PERMITS, LICENSES, INSPECTIONS AND FEES
        14) 1.14 PERIODIC FIELD OBSERVATION REPORTS
        15) 1.15 INSPECTION AND TESTS
        16) 1.16 SUBSTITUTIONS
        17) 1.17 DELIVER, STORAGE, HANDLING AND STAGING
        18) 1.18 TRAINING
        19) 1.19 QUALIFICATIONS
        20) 1.20 PERFORMANCE REQUIREMENTS
        21) 1.21 SEISMIC REQUIREMENTS
        22) 1.22 SUBMITTALS
        23) 1.23 CLOSEOUT SUBMITTALS
        24) 1.24 QUALITY ASSURANCE
        25) 1.25 MATERIAL AND EQUIPMENT STANDARDS
        26) 1.26 SEQUENCING AND SCHEDULE
        27) 1.27 FINAL ACCEPTANCE AND WORK CLOSEOUT

28) 1.28 WARRANTY
29) 1.29 MAINTENANCE
30) 1.30 SCHEDULE OF VALUES
31) 1.31 PROJECT CONDITIONS
32) 1.32 PROTECTION OF WORK AND PROPERTY
33) 1.33 SOFTWARE SERVICE AGREEMENT

B. In addition, provide all the following PART 1 - GENERAL requirements included within this specification section.

C. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 GENERAL REQUIREMENTS

A. Avigilon NVR and NVMS shall be a 'Sole Source' Proprietary Avigilon System Solution.
1. No Substitutions shall be considered.

B. Bidders must provide documentation that they themselves are factory-authorized representatives of all systems specified.

C. This Section shall be provided/installed in its entirety, and as follows, by a qualified Video Surveillance (CCTV) contractor.

a. The Bidder must customarily furnish the size, scope, and nature of this section, and must be an authorized manufacturer's representative, certified, experienced, and qualified to provide, install, program, troubleshoot, train, warrant, and service all the systems in this section in their entirety.

D. Provide all security infrastructure and equipment as specified.

E. Examine all Project Specifications and Drawings for requirements that affect this SECTION, whether or not such work is specifically mentioned in this SECTION.

1.03 SUMMARY

A. Alternates: Refer to Division 01 Section "Alternates" for description of Work of this Section affected by alternates.

B. This Section includes a video surveillance (CCTV) system consisting of cameras, digital video recorder, and a control station with its associated equipment, head end equipment, and UPS systems.

C. All products, materials, cabling, and installation, for the video surveillance (CCTV) system shall be included.
1. Exterior cameras shall be PoE.
2. Interior fixed cameras shall be PoE.

D. Video surveillance system shall be integrated with monitoring and control system specified in Division 28 Section “Intrusion Detection," which specifies systems integration.

1.04 SCOPE OF WORK

A. Avigilon NVR and NVMS shall be a 'Sole Source' Proprietary Avigilon System Solution.
   1. No Substitutions shall be considered.

B. The work under this Section includes provision of all material, labor, equipment, and supplies, and the performance of all operations to provide a complete working Video Surveillance System (CCTV), as required by the Drawings and details, and as specified herein. Where the Drawings, Specifications, Codes, Regulations, Laws, or the requirements of the local Authority conflict, provide the higher quality and higher quantity indicated or required, and follow the strictest requirement. In general, the work includes, but is not limited to, the following:

C. Video Surveillance (CCTV) Cameras, Network Video Recorder, IP Camera Licenses, and associated active components.
   1. Camera Mounts, standard and specialty device boxes for Video Surveillance System (CCTV).
   2. Free-standing Equipment Cabinet.
   3. Rack Mount LCD Monitor, Keyboard with Integrated Touchpad.
   4. UPS Battery Backup Systems, the contractor shall be responsible for calculation and recommendation of how many UPS systems are need it for the project.
   5. All Server and/or PC’s, hardware, software for the security systems will be provided.
      a. Power over Ethernet Data Switches provided by IT Department.
   6. Installing, setup, and testing of Network Video Recorder, is the Security contractor responsibility to design and to recommend the appropriate system to interface with the school network, coordinate with the school IT representative Connection and interface of Video Surveillance System to the Data LAN/WAN Network. Is the contractor Responsibility to do the calculation for the terabytes of storage digital video recorder it shall have enough storage to contain 1 month of video storage.
   7. Submit request for equipment, including all specifications per manufacturers suggested configuration, at least 8 weeks prior to date when equipment is needed for installation and setup.
   8. IP addresses and other network configuration information to be provided by owner's IT department. request for network addresses shall include the number of addresses needed for each system (i.e. CCTV, access control, intrusion, etc.) and a description of what each will be used for (i.e. CCTV camera, server, door controller panel, etc.). Request to be submitted to Owner at least three weeks prior to date when addresses will be needed for configuration and testing.
   9. Installing, setup, and testing of Network Video Recording Software on Windows.
   10. Interface and Integration between Systems.
   11. As part of system commissioning, testing shall include confirmation that the CCTV video images are being properly transmitted to monitoring company, as well as emergency operations center. Coordinate this testing with security director and monitoring company.
   12. Testing, Certification.
   13. Training.
   14. Coordination with manufacturers, other trades, and Owner.
   15. Core Drilling and Cutting and Patching if required
   16. Protection of new and existing work.
   17. Record Drawings and Documentation.

18. Staging.
19. Operation and Maintenance Instructions and Manuals for the Section's work.
20. Nameplates, Labels, and Tags.
21. Testing and Certification of all systems.
22. Fireproofing of Penetrations and Openings
23. Access panels and doors.

D. This Video surveillance system described within this specification shall be fully integrated with the monitoring and access control systems. The access control system shall be an platform. Complete interface, including user access and browser interface to this platform is the responsibility of the bidding contractor of this section.

E. All installation of each product specified within this document, peripheral devices, required licensing and configurations are required as part of this specification to establish a coherent, functional system as described within this bid package.

F. Data Cabling: Category 6A Plenum rated cabling has been furnished and installed by other trades and is not required as part of this bid specification.

a. System Functionality Overview:

1) System shall provide high-quality delivery and processing of IP-based video and control data using standard Ethernet-based networks.
2) System shall have seamless integration of all video surveillance and control functions.
3) Graphical user interface software shall manage all IP-based video matrix switching and camera control functions, and recording and archive/retrieval management. IP system shall also be capable of integrating into larger system environments.
4) System design shall include all necessary compression software for high-performance, dual-stream, Motion JPEG and H.264 video.
5) All camera signals shall be compressed to H.264, encoded, and delivered onto the network for processing and control by the IP video-management software.
6) Camera system units shall be ruggedly built and designed for extreme adverse environments, complying with NEMA Type environmental standards.
7) The Camera's live and recorded images shall include masking of the unwanted areas within each camera view for both privacy and to minimize storage space. These recorded images shall be defined with the Owner and the Technology Contractor, then submitted to the technology consultant for approval as part of the closeout documentation.
8) Configuration of the Video Server to utilize two (2) Ethernet connections and Network Interface cards; one (1) for incoming video and recording and one (1) to send recorded video to the storage device.
9) Video management software shall be configured for the following.
   a) Recorded Video Compression Rate: H.264
   b) Frame Recorded Per Second: Eight (8).
   c) Resolution should be set at the highest obtainable from each camera specified.
   d) Stored data shall be saved for thirty (30) calendar days.
   e) Interior cameras shall record 30 percent motion.
   f) Exterior cameras shall record 20 percent motion.
   g) Each camera "Field of View" shall be set up with the assistance of the Owner and/or the Technology consultant.

b. Surge Protection: Protect components from voltage surges originating external to equipment housing and entering through power, communication, signal, control, or sensing leads. Include surge protection for external wiring of each conductor's entry connection to components.
c. Provide and maintain in safe adequate condition all staging and scaffolding required for the proper execution of the work of this Section.
d. The Video Surveillance contractor shall remove and re-install all ceiling tiles as required for the work of this section.
e. Replacement of all ceiling tiles damaged as a result of the work of this section shall be at no cost to the owner.
f. Removal of all trash from site and clean-up of all areas of work under this SECTION
    1) Bidder shall perform daily clean-up of areas of work under this section and removal of all trash from the site.
g. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
h. System Configuration – Overview
    1) All system configuration(s) shall be included to attain a fully functional system and shall be within the Scope of work of the awarded Contractor of this section. This configuration shall include but not be limited to the following:
    2) Configuration of all cameras to be managed via the Avigilon Video Management software.
    3) Configuration of Video Surveillance Server to view/record/access all cameras.
    4) Configuration of video storage devices with the server.
    5) Configuration of the Video Server.
    6) Configuration of LAN switches – Active Electronics, as related to the systems specified within this document. Including VLANS and IP addressing shall be as indicated by the Owner.
    7) Configuration of the Avigilon VMS and S2 managed software to:
    8) a. Allow complete interface between both platforms
    9) b. Allow S2 to access and view all video surveillance cameras.
    10) c. Allow access and controlled network management system with Web and Internet access of the Video Surveillance system.

1.05 SYSTEM CONFIGURATIONS – OVERVIEW

A. All system configuration(s) shall be included to attain a fully functional system and shall be within the Scope of work of the awarded Contractor of this section. This configuration shall include but not be limited to the following:
    1. Configuration of all cameras to be managed via the Video Management software.
    2. Configuration of Video Surveillance Server to view/record/access all cameras.
    3. Configuration of video storage devices with the server.
    4. Configuration of the Video Server.
    5. Configuration of LAN switches – Active Electronics, as related to the systems specified within this document. Including VLANS and IP addressing shall be as indicated by the Owner.
    6. Configuration of the managed software to:

        a. Allow complete interface between both platforms

c. Allow access and controlled network management system with Web and Internet access of the Video Surveillance system.

1.06 RELATED SECTIONS

A. Related Sections include the following:

1. Section 26 0000 – Grounding and Bonding for Communication System.
2. Section 26 0000 – Pathways for Communication Systems.
3. Section 26 0000 – Raceways and Boxes.
4. Section 26 0000 – Penetration and Fire Stopping.
5. Section 27 0000 – Communications Cabling
6. Section 27 5100 – Pubic Address/Intercom System.
7. Section 27 5116 – Local Sound Systems.
8. Section 27 5313 – Clock and Program Control.
9. Section 28 1300 – Access Control System.
10. Section 28 1333 – Exterior Door Access, Intercom and Video Control System
11. Section 28 1600 – Intrusion Detection

1.07 SYSTEM DESCRIPTION

A. Provide a complete working Video Surveillance CCTV m as required by the Drawings and details and as specified herein.

B. Provide a complete Cabling system as specified herein.

C. Coordinate what has been provided and what else may be required in order to provide complete, installed operating cabling systems. Provide components and pathways required for a complete system.

PART 2 - PRODUCTS

2.01 REFER TO SECTION 270500 COMMON WORK RESULTS FOR DIVISION 27 0000 AND 28 0000

A. Refer to SECTION 27 0500 COMMON WORK RESULTS FOR DIVISION 27 0000 AND 28 0000 for additional PART 2 – PRODUCTS requirements
   1. Many of the PART 2 – PRODUCTS requirements are common to most of the individual Division 27 0000 and Division 28 0000 SECTIONS in these Contract Documents.
      a. Refer to SECTION 27 0500 for the additional common PART 2 – PRODUCTS requirements included in this project.
   2. Provide the following PART 2 – PRODUCTS requirements detailed in Section 27 0500 for this specification section unless the Division 27 0000 and Division 28 0000 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 2 – PRODUCTS Section:
      a. PART 2 – PRODUCTS
         1) 2.1 EQUIPMENT AND MATERIALS MINIMUM REQUIREMENTS
         2) 2.2 SLEEVES FOR RACEWAYS AND CABLES
         3) 2.3 SLEEVES AND SEALS
         4) 2.4 GROUT
         5) 2.5 FACTORY ASSEMBLED PRODUCTS
         6) 2.6 COMPATIBILITY OF RELATED EQUIPMENT
         7) 2.7 SPECIAL TOOLS AND KITS
         8) 2.8 FIRESTOPS AND PENETRATION SEAL MATERIALS
         9) 2.9 ANCHORING MATERIALS AND SUPPORTS
         10) 2.10 GROUNDING AND BONDING MATERIALS
         11) 2.11 SURGE AND LIGHTNING PROTECTION FOR OUTDOOR & UNDERGROUND CABLES (IF APPLICABLE)
         12) 2.12 SURGE PROTECTED POWER STRIP
         13) 2.13 EQUIPMENT CABINETS

B. In addition, provide all the following PART 2 – PRODUCTS requirements included within this specification section.

2.02 SYSTEM REQUIREMENTS

A. Video signal shall comply with the Video over IP standards, via TCP/IP network over Category UTP cable.

B. Surge Protection: Protect components from voltage surges originating external to equipment housing and entering through power, communication, signal, control, or sensing leads. Include surge protection for external wiring of each conductor entry connection to components.

C. Minimum Protection for Power Connections 120 V and More: Auxiliary panel suppressors complying with requirements in Division 26 Section "Transient Voltage Suppression."

1. Minimum Protection for Communication, Signal, Control, and Low-Voltage Power Connections: Comply with requirements in Division 26 Section "Transient Voltage Suppression" as recommended by manufacturer for type of line being protected.

D. Tamper Protection: Tamper switches on enclosures, control units, pull boxes, junction boxes, cabinets, and other system components shall initiate a tamper-alarm signal when unit is opened or partially disassembled. Control-station, control-unit alarm display shall identify tamper alarms and indicate locations.

E. Contractor shall provide and install a complete IP Digital Network Recording System including cameras, encoders, recording software, video storage, and all associated equipment for a complete and fully functional system.

F. Contractor shall provide all necessary video system cabling. Network and fiber patch cables will be provided by others.

G. Contractor shall provide all video system programming,

H. Contractor shall coordinate with the owner, all integration and recording requirements.

I. Contractor shall provide administrator and operator level training to cover all aspects of configuring and operating the Digital Network Recording System.

2.03 MANUFACTURERS:

A. Avigilon NVR and NVMS shall be a 'Sole Source' Proprietary Avigilon System Solution.
1. No Substitutions shall be considered.

2.04 EQUIPMENT CABINET

A. Manufacture: Provide products meeting the requirements of the Drawings and Specifications from the following Manufacturer:
B. Refer to Section 27 0500 for additional details.

C. Location: Install a Free-Standing Cabinet in MDF Head End Room, as indicated on the drawings to receive all home run cables from all camera locations, and shall receive all associated CCTV equipment.

2.05 RACK MOUNT LCD MONITOR, KEYBOARD WITH INTEGRATED TOUCHPAD

A. Manufacturer: Middle Atlantic, Part # RM-KB-LCD17, or approved equal. (PROVIDE – 1)

B. Specifications

1. LCD Monitor shall occupy 1 rack space.
2. Overall dimensions shall be 19" W x 1.75” D x 17.75" H.
3. The chassis shall be constructed of 16-gauge and 18-gauge steel.

4. Keyboard shall have a standard 105 key PS/2 keyboard with touchpad.
5. LCD display size shall be 17" diagonal with a resolution of 1280 x 1024
6. Screen shall have a typical contrast ratio of 350:1.
7. Power source shall be 90 - 240 VAC with a power consumption of 25 watts.
8. Keyboard with LCD display shall have an operating range of 32°F - 122°F.
9. Installed key lock for security standard.
10. Keyboard with LCD display shall comply with part 15 of the FCC rules and comply with CE regulation EN 55 022: Class B.
11. Unit shall be finished in a black powder coat.
12. Unit shall be UL Listed in the US and Canada.
13. Rack mount LCD monitor and keyboard with integrated touchpad shall be warranted to be free from defects in parts or materials for a period of 1 year.

2.06 VIDEO SURVEILLANCE SYSTEM (CCTV) CABLING.

A. By Others - All UTP and Fiber Optics data cabling shall be provided by the Telecommunications Contractor under a separate contract.
   1. Power over Ethernet for:
      a. Cameras

B. Provide all line cords as required, field-measured for proper length.
   1. Provide any additional cabling as required per manufacturer's recommendations.

C. Provide flexible weatherproof conduits from back box to all exterior camera pendant mounts as required.
   1. Back boxes at camera locations and EMT conduit with pull strings shall be provided by the Electrical Contractor. Refer to Division 26.

2.07 VIDEO SURVEILLANCE SYSTEM (CCTV) PRODUCT MANUFACTURERS

A. General:
   1. Avigilon
   2. Or approved equal

B. Video Surveillance System (CCTV) cameras shall be from the same manufacturer.
   1. All systems and components shall be provided with the availability of a toll free (U.S. and Canada), 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.
   2. All systems and components shall be provided with a one-day turn around repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and non-warranty items.
   3. The manufacturer shall provide a three-year (3) warranty on all Video Surveillance System (CCTV) active components

C. Basis-of-Design Products: Subject to compliance with requirements, provide comparable products by the following:

1. Cameras:
   a. Base of Design Avigilon, Axis Communications

2. Video Server Management and Camera Licenses:

   a. Avigilon NVMS

3. Network Video Recorder Hardware:
   a. All hardware will be Video Surveillance Contractor provided.
   b. Avigilon NVR

4. UPS Systems:
   a. American Power Conversion Corporation
   b. 132 Fairgrounds Road
   c. W. Kingston, RI 02892

D. UPS Battery Backup Systems

1. American Power Conversion Smart-UPS XL Modular 1500VA 120V Rack Mount/Tower, APC Part # SUM1500RMXL2U, or approved equal. (PROVIDE AS REQUIRED)
2. American Power Conversion Service Pack, 3-Year Extended Warranty, APC Part # WBEXTWAR3YR-SP-04, or approved equal. (PROVIDE AS REQUIRED)
3. UPS Specifications

   a. Output
      Output Power Capacity: 1425 Watts / 1440 VA
      Max Configurable Power: 1425 Watts / 1440 VA
      Nominal Output Voltage: 120V
      Output Connections: (8) NEMA 5-15R

   b. Input
      Bypass: Internal Bypass (Automatic and Manual)
      Nominal Input Voltage: 120V
      Input Frequency: 50/60 Hz +/- 3 Hz (auto sensing)
      Input Connections: NEMA 5-15P

   c. Batteries & Runtime
      Battery Type: VRLA
      Typical recharge time: 3 hour(s)
      Typical Backup Time at Half Load: 28.3 minutes (712.5 Watts)
      Typical Backup Time at Full Load: 11.9 minutes (1425 Watts)

   d. Communications & Management
      Interface Port(s): DB-9 RS-232, RJ-45 10/100 Base-T, USB
      Pre-Installed SmartSlot™ Cards: AP9619
      Control panel: LED status display with load and battery bar-graphs and On Line: On Battery: Replace Battery: Overload and Bypass Indicators
      Audible Alarm: Alarm when on battery: distinctive low battery alarm: configurable delays
      Emergency Power Off (EPO): Optional

e. Surge Protection and Filtering
Surge energy rating: 540 Joules
Filtering: Full time multi-pole noise filtering: 0.3% IEEE surge let-through: zero clamping response time: meets UL 1449

f. Physical
Maximum Height: 3.40 inches (86 mm)
Maximum Width: 17.00 inches (432 mm)
Maximum depth: 26.70 inches (678 mm)
Rack Height: 2U
Net Weight: 103.00 lbs. (46.82 kg)

g. Environmental
Operating Environment: 32 - 104 °F (0 - 40 °C)
Operating Relative Humidity: 0 - 95%
Operating Elevation: 0-10000 feet (0-3000 meters)
Storage Temperature: 23 - 131 °F (-5 - 55 °C)
Storage Relative Humidity: 0 - 95%
Storage Elevation: 0-30000 feet (0-9000 meters)
Audible noise at 1 meter from surface of unit: 55 dBA
Online Thermal Dissipation: 300.00 BTU/hr

h. Standard Warranty: 2 years repair or replace

i. Connect all equipment and test for proper operation during power outage.

j. Connect UPS Network Management Card w/ Environmental Monitoring to Owner's existing data network and test for proper operation.

2.08 POWER OVER ETHERNET DATA SWITCHES OPTIMIZED FOR CCTV

A. Provided by Others under separate contract:
1. PoE Data Switches to support the Video Surveillance System
2. The Video Surveillance System Contractor shall coordinate with the PoE Data Switch contractor, the requirements of the PoE Data Switches for proper interface to the Video Surveillance System.

B. Data outlets, cabling, patch cables shall be provided, terminated and tested by the Telecommunication System Contractor to support VoIP cameras, servers and workstation as indicated on drawings. Interface to the VoIP cameras and servers as indicated on drawings provided by the Video Surveillance System Contractor.

2.09 CAMERAS

A. Manufacturer: Subject to compliance with the indicated camera requirements, any submitted alternate must be a certified camera of the Network Management Software and meet or exceed the cameras requirements.
1. Acceptable Manufacturers:

a. Avigilon
b. Axis Communications
c. Approved Equal

B. All associated devices and/or licensing is required to obtain a fully functional system, as mandated by this bid specification, shall be included as part this bid specification.

C. Licensing
1. All required licensing shall be included as part of this specification.

D. Lightning Protection
1. Provide for all exterior cameras
a. Provide UL497 Primary Protection near exterior camera location
b. Provide UL497A Secondary Protection near network switch location

E. Camera Locations:
1. All camera locations MUST be field verified with the Owner prior to start of project. Architectural drawings are for approximation purposes only. Additional charges will not be allowed for installation in areas not reviewed or approved by the Owner.
2. Obtain approvals:
a. Coordinate with the Architect the final exact camera location.
b. Review each camera's viewing options with end-user.
1) Provide approval of final camera view from end-user.
3. Exterior Cameras
a. Typical wall mounted cameras, @ 12' AFG, unless otherwise noted.
b. Typical Soffit or Ceiling Mounted Cameras located as shown on drawing.
c. Horizontally mounted as shown on drawings
4. Interior Cameras
a. Typical wall mounted cameras, @ 96" AFF, unless otherwise noted.
b. Typical Soffit or Ceiling Mounted Cameras located as shown on drawing.
c. Horizontally mounted as shown on drawings

F. Ethernet and PoE Extenders
1. Provide Ethernet, UTP, PoE Extenders for all data drops that exceed 90 meters
2. The extenders shall include both transmitters and receivers
3. Provide product solutions by Nitek or approved equal

G. General Requirements:
1. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
2. All systems and components shall have been thoroughly tested and proven in actual use in the presence of the Owner or technology consultant.
3. All systems and components shall be provided with the availability of a toll-free (U.S.), 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.
4. All systems and components shall be provided with a one-day turnaround repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and non-warranty items.

H. Camera Certifications:
   1. CE, Class B
   2. FCC, Class B
   3. UL/cUL Listed
   4. C-Tick

I. Camera Warranty
   1. Three (3) years, parts and labor

J. Exterior Network Camera:
   1. Used for all exterior locations unless otherwise indicated on the contract documents.
   2. Basis of design:
      a. Axis #P3227-LVE Network Camera
      b. Other cameras shall be considered providing the meet or exceed all the requirements of this camera.
   3. Features and functions of this camera include, but are not limited to the following:
      a. Fixed Dome Camera
      b. Exterior Rated
      c. 5 Mega Pixels
      d. Vandal Resistant
      e. Lens – Varifocal 3.5-10mm
      f. WDR – Wide Dynamic Range
      g. Automatic Day/Night filter
      h. IR Illuminators
      i. Remote Zoom
      j. Remote Focus
      k. Corridor/Hallway view
   4. Mounts for Camera, provide as required for applicable mounting locations including applicable Mounting Kits and Adapter Plates as required.
      a. Exterior Cameras - Provide Pendant Wall Mount
         1) Provide for all exterior locations unless otherwise indicated on the contract documents.
            a) Provide Axis Pendant Wall Mount #T91E61
      b. Wall Mount
      c. Soffit Mount
      d. Ceiling Mount

K. Exterior - Wide Angle - Network Camera:
   1. Used for exterior locations only as indicated on the contract documents.
   2. Basis of design:
      a. Axis #M3024-LVE Network Camera
      b. Other cameras shall be considered providing the meet or exceed all the requirements of this camera.
   3. Features and functions of this camera include, but are not limited to the following:
      a. Fixed Dome Camera
      b. Exterior Rated
      c. 1 Mega Pixels
      d. Vandal Resistant
      e. Lens – 2.8mm

f. WDR – Wide Dynamic Range
g. Automatic Day/Night filter
h. IR Illuminators

4. Mounts for Camera, provide as required for applicable mounting locations including applicable Mounting Kits and Adapter Plates as required.
   a. Exterior Cameras - Provide Pendant Wall Mount
      1) Provide for all exterior locations unless otherwise indicated on the contract documents.
         a) Provide Axis Pendant Wall Mount #T91E61
   b. Wall Mount
   c. Soffit Mount
   d. Ceiling Mount

L. Interior Network Camera:
1. Used for all interior locations unless otherwise indicated on the contract documents.
2. Basis of design:
   a. Axis #P3227-LV Network Camera
   b. Other cameras shall be considered providing the meet or exceed all the requirements of this camera.
3. Features and functions of this camera include, but are not limited to the following:
   a. Fixed Dome Camera
   b. Exterior Rated
   c. 5 Mega Pixels
   d. Vandal Resistant
   e. Lens – Varifocal 3.5-10mm
   f. WDR – Wide Dynamic Range
   g. Automatic Day/Night filter
   h. IR Illuminators
   i. Remote Zoom
   j. Remote Focus
   k. Corridor/Hallway view
4. Mounts for Camera, provide as required for applicable mounting locations including applicable Mounting Kits and Adapter Plates as required.
      1) Wall Mount
      2) Soffit Mount
      3) Ceiling Mount
   b. Pendant Wall Mount, only as indicated on contract documents
         a) Provide Axis Pendant Wall Mount #T91E61

M. Interior - Wide Angle-Network Camera:
1. Used for interior locations only as indicated on the contract documents.
2. Basis of design:
   a. Axis #M3046-V Network Camera
   b. Other cameras shall be considered providing the meet or exceed all the requirements of this camera.
3. Features and functions of this camera include, but are not limited to the following:
   a. Fixed Dome Camera
   b. 4 Mega Pixels
   c. Vandal Resistant

d. Lens – 2.4mm
e. WDR – Wide Dynamic Range
f. Corridor/Hallway view

4. Mounts for Camera, provide as required for applicable mounting locations including applicable Mounting Kits and Adapter Plates as required.
    1) Wall Mount
    2) Soffit Mount
    3) Ceiling Mount
    b. Pendant Wall Mount, only as indicated on contract documents
        a) Provide Axis Pendant Wall Mount #T91E61

N. Corner Mount – for Elevators and other Areas - Wide Angle – Vandal Network Camera:
1. Used for locations as indicated on the contract documents.
2. Basis of design:
    a. Axis #P9106-V with Brushed Steel Cover, Network Camera
        1) Also available in White finish, white finish only for applicable locations as indicated on drawings.
    b. Other cameras shall be considered providing the meet or exceed all the requirements of this camera.
3. Features and functions of this camera include, but are not limited to the following:
    a. Made for Corner Mounting Only, Wall + Wall or Wall + Ceiling
    b. Fixed Dome Camera
    c. IP66 and Ik10 Rated
    d. 3 Mega Pixels
    e. Vandal Resistant
    f. Lens – 1.8mm
    g. 130 degree Horizontal Viewing angle
    h. WDR – Wide Dynamic Range
4. Mounts for Camera, provide as required for applicable mounting locations including applicable Mounting Kits and Adapter Plates as required.
    a. Corner Mount
        1) Inside Corner, including all elevators, Wall + Wall Mount or Wall + Ceiling Mount

2.10 NETWORK VIDEO RECORDER (NVR)

A. Performance Requirements
1. Throughput: NVR system must be capable of managing a combined 1800 Mbps of total throughput with handling for simultaneous recording, playback and live streaming.
2. Search Capacity: System must be capable of supporting up to one hundred (100) cameras.
3. Storage Capacity: System must be capable of storing up to 180TB raw or 157TB when configured as RAID 6.
4. Expansion: System must be configured to be capable of future expansion and scaling.
5. Mounting: Standard server enclosure (rack) mounting, requiring no greater than a 2U configuration.
6. Electrical Power:
    a. Input: 100 to 240 V AC, 50/60 Hz, auto-switching.
    b. Supply: Appliance must be configurable for multiple power supplies that may be replaced without the need to power down (hot-swappable).

c. Maximum Power Consumption: No greater than 2200W.

B. Network Recorders
1. Basis of Design Product: Avigilon HD NVR4 Premium.
2. System Design:
a. Drive Configuration:
1) Video Storage: Up to 18 x large form factor near-line SAS hard disk drives, hot-swappable, RAID 6.
2) Operating System: (2) M.2 SSD drives, RAID 1.

C. Storage Capacity: 64 TB when configured with RAID 6.
1. Storage Capacity: 96 TB when configured with RAID 6.
2. Storage Capacity: 128 TB when configured with RAID 6.
3. Storage Capacity: 157 TB when configured with RAID 6.
4. Operating System: Microsoft Windows Server 2016.
5. Processor: Intel Xeon.
6. RAM: 32GB DDR4.
7. Networking: (2) 10GB Ethernet SFP+ ports and (2) 1GB Ethernet RJ-45 ports (1000Base-T).
8. Power Supply: (2) 80 plus Titanium power supplies configured to allow swapping without the need to power down.
9. Video Output: VGA.
10. Mounting: 2U rack mount chassis.
11. Operational Range:
a. Temperature: 10 degrees C to 35 degrees C [50F to 95F].
b. Relative Humidity: 10–80 percent (non-condensing).
c. Altitude: 3048 meters [10,000 ft].

2.11 NETWORK VIDEO MANAGEMENT SOFTWARE (NVMS)

A. Manufacturers
1. Manufacturer List. Other manufacturers shall be considered providing they meet or exceed the contract document requirements.
a. Avigilon Control Center
1) Version 6.x
2) Latest general release version
b. Design based on Avigilon Control Center 6.

B. Description
1. Summary: The NVMS shall be available as a pre-loaded application in the following Avigilon hardware:
a. ACC Edge Solution (ES) HD Recorder
b. ACC ES Analytics Appliance
c. Avigilon HD Video Appliance
d. Avigilon HD Network Video Recorder
e. Avigilon HD Network Video Recorder Workstation
2. The NVMS shall be available as a standalone software application with the following system requirements:
a. Windows 7

b. Windows 8.1
c. Windows 10
d. Windows Server 2012 / 2012 R2

3. The NVMS software application can be installed on any open platform hardware, and does not require hardware multiplexer or time-division technology for video or audio.
4. The NVMS shall support increasing recording storage capacity without additional licenses.
5. The NVMS shall decompress H.264 video through the client graphics card / graphical processing unit.
6. The NVMS shall be an enterprise level software solution that shall be scalable from one client, server and camera up to at least:
   a. 100 servers per site.
   b. 300 cameras per server.
   c. Up to 10,000 cameras per site.
   d. Indefinite number of concurrent client to site connections.
   e. Expressed numbers may be exceeded depending on the bandwidth capability of the network and server.
7. The NVMS server and client software applications can be installed and run on the same computer or on separate computers.
8. The NVMS shall include but not limited to the following applications:
   a. Server Software Applications
      1) Avigilon Control Center Server
      2) ACC Gateway
      3) ACC Analytics Service
      4) ACC Web Endpoint
   b. Client Software Applications
      1) ACC Client
      2) ACC Player
      3) ACC Virtual Matrix
      4) ACC Mobile 2.x
      5) ACC Mobile 3.x
      6) Gateway Web Client (HTML5)
9. The NVMS shall be available in the following languages:
   a. Arabic
   b. English
   c. French
   d. German
   e. Italian
   f. Japanese
   g. Korean
   h. Spanish
10. The NVMS shall secure video and audio data by securely transmitting all command and control data via TCP/IP using cryptographic keys based on SSL/TLS to prevent eavesdropping or tampering.
11. The NVMS shall support storage and processing of video and audio.
    a. Audio and video must be recorded natively from the camera with no transcoding.
    b. Audio and video must be synchronized regardless of frame-rate, resolution or bitrate.
12. The NVMS shall support industry standard video compression formats, including but not limited to:
    a. JPEG2000

b. MJPEG
c. MPEG-4
d. H.264

13. The NVMS shall perform dynamic video stream management.
    a. Also known as Avigilon High Definition Stream Management (HDSM)™
    b. Dynamic video stream management shall reduce the system bandwidth and storage usage by only transmitting video to the client as required.
    c. The client shall communicate the maximum monitor resolution to the server and the server shall act as a video proxy and stream the required video resolution.
    d. The NVMS shall tile multi-megapixel videos streams and only transmit the requested portion of the video stream to the client.
        1) Recorded video storage is extended by dynamically reducing the quality of the recorded video over time so that video is still viable but uses less storage.
        2) JPEG and JPEG2000 video image rate is reduced to one half or one quarter of the original image rate.
        3) H.264 video records a high quality stream and a low quality stream. The high quality stream is discarded after a set amount of time.
    e. Shall be available for local users, remote users and mobile devices.
14. The NVMS shall find devices and systems on the network by the following methods:
    a. Automatic — servers, video and audio sources that are connected to the same network as the client are automatically discovered.
    b. Search — servers, video and audio sources running on a different network segment than the client can be discovered by searching for the device's IP address or hostname.
    c. Parent to child — logging into a parent site automatically discovers the configured children sites.
15. The NVMS shall allow manually discovered server instances, video and audio sources, and access control appliances to be visible to all users of a single client workstation.
    a. Network settings for all server instances will be identical for all users of a single client workstation.
16. The NVMS shall support recording and management of video and audio sources through the use of industry standard drivers. These drivers shall include:
    a. ONVIF Profile S
    b. Publically Published API
17. The NVMS shall support physical access control management from:
    a. Avigilon Access Control Manager application.
        1) Support configurable network connection to an ACM appliance.
        2) Create link between cameras and doors.
        3) Create rules triggered by door actions that result in actions performed by the NVMS.
        4) Synchronize users from ACM to provide access to doors.
        5) Provide door grant access while monitoring video.
18. The NVMS shall support monitoring video and audio sources from:
    a. Avigilon H4 HD Cameras
    b. Avigilon Self-Learning Analytics Cameras
    c. Avigilon Presence Detector Sensor
    d. Avigilon IP H.264/JPEG2000 Cameras and Encoders
    e. Rialto Video Analytics Appliances
    f. ONVIF 1.00, 1.01, and 1.02 cameras
    g. ACTi cameras/encoders
    h. Arecont cameras

i. Axis cameras/encoders
j. Bosch cameras/encoders
k. IQInvision cameras
l. Mobotix cameras
m. Panasonic cameras/encoders
n. Pelco cameras
o. Samsung cameras/encoders
p. Samsung Techwin cameras
q. Sanyo cameras
r. Scallop cameras
s. Sightlogix cameras
t. Sony cameras
u. VideoIQ cameras/encoders

19. The NVMS shall support de-warping of live and recorded video.
    a. From Avigilon H4 Fisheye cameras.
    b. From supported cameras fitted with an Immervision Panomorph lens.
    c. From cameras with a fixed fisheye lens, including but not limited to:
        1) Oncam Grandeye Evolution line of cameras.
20. The NVMS shall provide the ability to configure and manage alarms and events.
    a. Can define event triggers that are configured to result in an alarm.
    b. Alarms can be generated as a result of the following event types:
        1) Detect events that occur within a camera's field of view.
        2) Detect presence of persons within a sensor's range
        3) Detect if the video or audio signal is lost and alert the system administrator.
        4) Door activity detected by the ACM application.
        5) Notify users of system errors.
        6) Receive alarms from third party systems (access control, etc.) and configured to be monitored.
        7) Support receiving digital input triggers and triggering digital outputs from:
            a) An input/output board
            b) Supported IP camera, encoder or sensor
            c) Integrated systems, including POS
    c. Can receive events through the ONVIF driver.
    d. Can configure resulting video operations.
    e. Support receiving Simple Network Management Protocol (SNMP) messages from servers and alert users.
    f. Alarm and event notifications can be customized and forwarded to:
        1) Users logged into the client application
        2) Users logged into the mobile application
        3) Configured email addresses
        4) External entities and third party software, such as central monitoring stations and call centers
    g. Can escalate alarms from one user or group to another if the alarm is unacknowledged for a preset duration.
    h. Email notifications can be configured to:
        1) Notify users and system administrators when an event or system health error occurs.
        2) Schedule when email notifications are sent.
        3) Include camera images in email notifications.
    i. Central Station Notifications can be configured to:

1) Notify a central station monitoring service when an event or system health error occurs.
2) Include video clips and/or camera images with camera motion, analytic or digital input events.

21. The NVMS shall provide the ability to send central monitoring stations periodic heartbeat messages, or regular notification to confirm the system connection and that there are no events of note.
22. The NVMS shall maintain an event log and allow users to use the log events as triggers for specific event actions. Logged events include:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
            a) Server Events
            b) Device Events
            c) User Events
            d) Alarm Events
            e) POS Transition Events
            f) License plate recognition Events
            g) Access Control Events
23. The NVMS shall have the ability assign actions in response to specific event triggers. Response actions include:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
24. The NVMS shall support conditional event triggers based on the selected digital input status.
25. The NVMS shall monitor events and alarms based on a user configurable schedule.
26. The NVMS shall provide a maintenance log and audit trail of all system errors and events.
27. The NVMS shall support the operation of a point of sale (POS) system that include:
    a. The ability to receive transaction information from POS sources.
    b. Support multiple encoding formats from POS sources.
    c. The ability to monitor live and recorded transactions from POS sources with linked video.
    d. The ability to generate events based on POS transaction exceptions.
28. The NVMS shall support software level integration with third-party applications using the NVMS software development kit (SDK). The SDK shall provide the following features to the third-party software:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
29. The NVMS shall provide a process for upgrading versions:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
    b. The NVMS shall run as a service configured to automatically start when the server or workstation is powered on.
30. The NVMS shall allow users to monitor and administer the system from:
    a. A single client application for monitoring live and recorded video and audio.
    b. A single window for administrating all system connections.
    c. A single tab for monitoring overall system health and connected sites in parent-child relationships.

d. Any client with access to a local or distributed network.

31. The NVMS shall provide multiple levels of system redundancy:
    a. Cluster and synchronize up to 100 servers into a unified site.
        1) In the event of a server failure, the system is able to continue running and allow other servers to take over the failed server's tasks.
    b. Centralized system administration
        1) Site and server configuration details are replicated to all servers in the site.
        2) Sites can be organized in a hierarchical parent-child relationship where the parent can always control child site settings.
    c. Connect a video or audio source to multiple servers to achieve redundant recording.
    d. Create a failover connection for a video or audio source between servers in a site.
32. The NVMS shall provide multiple levels of video storage management:
    a. Tier 1 — video recorded directly on local server.
    b. Tier 2 — recorded video continuously archived to long term storage.
    c. Ad hoc — recorded video on local server can be archived to user-defined storage location on demand.
33. The NVMS shall provide the capability to rename all sites, servers, and video and audio sources.
34. The NVMS shall support the following video and audio recording options:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
35. The NVMS shall provide configurable classified object detection for each device with self-learning video analytics capabilities.
    a. Allow users to connect individual video sources to analytics appliance channels.
    b. Allow users to configure events based on classified object motion detection.
    c. Allow configured video analytics events to be used as alarm and rule triggers.
    d. Allow users to mark classified objects as a true or false detection.
    e. Collected data can be transmitted to the video source to improve the accuracy of the video analytics device.
36. The NVMS shall support the following video analytic event types when captured by supported cameras:
    a. Objects in area
    b. Object loitering
    c. Objects crossing defined line
    d. Object appears or enters area
    e. Object not present in area
    f. Objects enter area
    g. Objects leave area
    h. Object stops in area
    i. Anticipated direction of travel is violated
    j. Scene dramatically changes in an unexpected fashion
37. The NVMS shall authenticate users before granting access to the system.
38. The NVMS shall provide access rights that can be tailored to each user or group of users. Access rights include:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
39. The NVMS shall provide the ability to rank access rights based on a user's position within a configured hierarchy.

a. Ranked users may only administer changes to users and groups that are subordinate in rank.
b. The corporate hierarchy can be used to enforce the authority of a parent site over the user and group settings of one or more child sites.
c. The NVMS shall allow the creation of site families.
d. A child site can be connected to an appropriately licensed parent site.
e. The parent site will have control over the user permission and information of a child site.
f. If a user has access to the parent site, child sites are automatically discovered.

40. The NVMS shall support multiple credentials to gain access to the system including, but not limited to:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
41. The NVMS shall provide the ability to schedule archive of recorded video with associated events to a local folder or mapped network drive.
42. The NVMS shall provide the ability to backup settings and configuration for each server, including:
    a. All site settings such as users/groups, maps and web pages.
    b. All server settings including device connections.
    c. Ability to encrypt the backup to maintain security of information
43. The NVMS shall be able to restore backed-up settings and configurations to a new or replacement server in a site.
44. Support back-up files from version 5.4 or newer.
45. The NVMS shall support the operation of a license plate recognition system that include:
    a. The ability to define a region of an image where license plate detection is performed.
    b. Detected license plates shall be stored with the video data.
    c. The ability to create a watch list that is used to create events when specific license plates are detected.
46. The NVMS shall provide the ability to enable and configure PTZ control on the RS-485 interface of a video source.
    a. The NVMS shall support the following PTZ protocols:
        1) Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
            a) Refer to specified manufacturers' model #'s for all additional details.
47. The NVMS shall provide the ability to change the following image quality and image rate parameters for each individual video source:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
48. The NVMS shall provide the ability to change the following supported video options at the client or video source:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
49. The NVMS shall provide the ability to change the input, output, gain and volume for an audio source.
50. The NVMS shall support the use of uni-directional and bi-directional audio.
51. The NVMS shall provide the ability to link any audio source to any video source.
    a. Able to link multiple audio sources to a single video source.
    b. Able to link an audio source to many video sources.

52. The NVMS shall provide the ability to synchronize audio and video on playback.
53. The NVMS shall provide the ability to manage and personalize user access:
    a. Allow administrators to override user access to an NVR if there are insufficient licenses.
    b. Set the client software to automatically log in to multiple sites.
    c. Set the client software to automatically log out of all sites when the application is left idle.
    d. Set the client software to automatically save and restore the last window layout.
    e. Set the maximum bandwidth of streamed video data from the server to the client application.
54. The NVMS shall support the ability to bias the displayed video to a lower frame rate or lower image resolution if there is insufficient network bandwidth or processing power.
    a. Bias shall not affect video recording.
    b. Bias shall not affect video exports.
55. The NVMS shall provide the ability to control the client application using the following types of peripherals:
    a. A USB keyboard and/or mouse
    b. A USB joystick
    c. A PTZ controller keyboard
56. The NVMS shall support the ability to share the application window display in a joint session with other users for collaborative investigations.
57. The NVMS shall provide a system tree of video sources, maps, saved views and web pages in the video monitoring tab.
    a. The system tree display can be configured.
    b. The system tree can be organized into virtual folders that are represented as branches within the site.
    c. Users can be granted access to individual items or entire folders within the system tree.
58. The NVMS shall support an unlimited number of monitors used for monitoring video and audio streams connected to a single workstation.
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
59. The NVMS shall provide a Virtual Matrix application module:
    a. Supporting remote control of multiple monitor displays, including video walls.
    b. Connected monitor displays shall be able to simultaneously display video streams from multiple sites.
60. The NVMS shall display overlays on top of video images.
    a. Auto-hiding functional overlays that changes depending on video streaming mode and device support. Functional overlays include but are not limited to:
        1) Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
            a) Refer to specified manufacturers' model #'s for all additional details.
61. The NVMS shall support alarm management operations through the video monitoring interface. Including but not limited to:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
62. The NVMS shall support the ability to manually trigger digital output through any of the following:
        1) A pre-configured software control.
        2) A physical trigger that is connected to a supported input/output device.

63. The NVMS shall support creating bookmarks for recorded video and audio. Bookmarks can be:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
64. The NVMS shall support the ability to create a map that represents the physical location of cameras and other devices throughout the surveillance system.
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
65. The NVMS shall support pan-tilt-zoom (PTZ) cameras and provide the following:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
66. The NVMS shall support playback of recorded video and audio.
    a. Forward and reverse playback of recorded video and audio at variable speeds.
    b. Video and audio shall playback synchronously when video and audio sources are linked.
    c. Play back of recorded video shall include video archived to long term storage.
67. The NVMS shall provide the ability to request a second user authentication before recorded video may be displayed.
68. The NVMS shall support the following methods for navigating recorded video:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
69. The NVMS shall support recorded video search:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
70. The NVMS shall support Avigilon Appearance Search™ technology:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.
71. The NVMS shall support the ability to export media and provide the following options:
    a. Provide all manufacturers' features/functions/capabilities for this system, even if they are not mentioned in this specification.
        1) Refer to specified manufacturers' model #'s for all additional details.

2.12 2.2 ACCESSORIES

A. HD NVR Analytics Kit (Optionally Available)
    1. NVIDIA Quadro M2000:
        a. Support minimum of 4 GB of on-board GPU memory.
        b. Support an NVIDIA CUDA Compute Capability 5.0 or above.

B. ACC-USB-JOY-PRO — Avigilon USB Professional Joystick Keyboard (Optionally Available)

2.13 VIDEO TRANSMISSION

A. All camera video signals shall be transmitted via IP-based technology over a copper and fiber optic back bone network to the head-end Network Video Recorder located in the MDF.

B. Contractor shall install all necessary connections at both camera and network switch end. Patch cords to be provided by the Telecommunication contractor.

2.14 SIGNAL TRANSMISSION COMPONENTS

A. All cabling is by the Telecommunication Contractor under separate contract

B. The Cable it will be Category-6A UTP. Comply with requirements in Section 271500 "Communications Horizontal Cabling."

C. All field devices will terminate on Telecommunication Contractor supplied patch panels located in the MDF or IDF nearest to the connecting device. All patch panel and category 6A terminations will be made according to the TIAI/EIA-568B standard. Patch panels shall be rack mounted and either 24 or 48 ports as required with at least 20% of the ports available for expansion.

2.15 CONDUCTORS AND CABLES FOR DIVISION 28 0000 ELECTRONIC SAFETY AND SECURITY

A. All Cabling and Conductors: Provide Type and Size as recommended in writing by system manufacturer.

B. Provide all plenum rated cabling for completely operation systems, all cabling shall meet or exceed manufactures requirements for its intended use. Provide manufactures cabling recommendations in writing.

C. All field devices will terminate on Telecommunication Contractor supplied patch panels located in the MDF or IDF nearest to the connecting device. All patch panel and Category 6A terminations will be made according to the TIAI/EIA-568B standard. Patch panels shall be rack mounted and either 24 or 48 ports as required with at least 20% of the ports available for expansion.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
   1. 27 1000 Structured Cabling Contractor shall provide the following cables and hardware:
      a. Data/Camera outlets UTP cabling, shall match that specified in 27 1000 Structured Cabling Contractor
      b. UTP Cable Hardware, shall match that specified in 27 1000 Structured Cabling Contractor
      c. Fiber Optic Cabling, shall match that specified in 27 1000 Structured Cabling Contractor
      d. Fiber Optic Hardware, shall match that specified in 27 1000 Structured Cabling Contractor
   2. RS-232 cabling.
   3. RS-485 cabling.
   4. Low-voltage control cabling.
   5. Control-circuit conductors.

6. Wire and cable for Interfaces to Fire Alarm System.
   a. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.
7. Cable Identification products
   a. Comply with TIA-606-B and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

PART 3 - EXECUTION

3.01 REFER TO SECTION 270500 COMMON WORK RESULTS FOR DIVISION 27 0000 AND 28 0000

A. Refer to SECTION 27 0500 COMMON WORK RESULTS FOR DIVISION 27 0000 AND 28 0000 for additional PART 3 – EXECUTION requirements
   1. Many of the PART 3 – EXECUTION requirements are common to most of the individual Division 27 0000 and Division 28 0000 SECTIONS in these Contract Documents.
      a. Refer to SECTION 27 0500 for the additional common PART 3 – EXECUTION requirements included in this project.
   2. Provide the following PART 3 – EXECUTION requirements detailed in Section 27 0500 for this specification section unless the Division 27 0000 and Division 28 0000 requirements are specifically un-related to this specification or related to requirements provided by other trades as detailed in the contract documents. Provide the requirements from the following PART 3 – EXECUTION Section:
      a. PART 3 - EXECUTION
         1) 3.1 GENERAL INSTALLATION REQUIREMENTS
         2) 3.2 INTEGRATOR/INSTALLER
         3) 3.3 CONFORMITY AND COMPATIBILITY PRIOR TO INSTALLATION
         4) 3.4 WORKMANSHIP
         5) 3.5 WIRING METHODS
         6) 3.6 INSTALLATION OF CONDUCTORS AND CABLES
         7) 3.7 CONNECTIONS
         8) 3.8 POWER AND CONTROL-CIRCUIT CONDUCTORS
         9) 3.9 INSTALLATION OF HANGERS AND SUPPORTS
         10) 3.10 CUTTING AND PATCHING
         11) 3.11 CONCEALMENT
         12) 3.12 EQUIPMENT MODIFICATION
         13) 3.13 SLEEVE AND SLEEVE SEAL INSTALLATION FOR PENETRATIONS
         14) 3.14 FIRESTOPS AND PENETRATION SEALS
         15) 3.15 ANCHORING METHODS
         16) 3.16 GROUNDING AND BONDING
         17) 3.17 EQUIPMENT RACKS, CABINETS AND BRACKETS
         18) 3.18 PROTECTION
         19) 3.19 IDENTIFICATION
         20) 3.20 FIELD QUALITY CONTROL
         21) 3.21 CLEANING
         22) 3.22 DEMONSTRATION
         23) 3.23 PROJECT OWNER COORDINATION
         24) 3.24 ADJUSTMENTS

B. In addition, provide all the following PART 3 – EXECUTION requirements included within this specification section.

3.02 VIDEO SURVEILLANCE SYSTEM INSTALLATION

A. Install cameras and infrared illuminators level and plumb.

B. Install cameras with 96-inch- minimum clear space below cameras and their mountings. Change type of mounting to achieve required clearance.

C. Set pan unit and pan-and-tilt unit stops to suit final camera position and to obtain the field of view required for camera. Connect all controls and alarms, and adjust.

D. Install power supplies and other auxiliary components at control stations, unless otherwise indicated.

E. Install tamper switches on components indicated to receive tamper switches, arranged to detect unauthorized entry into system component enclosures, and mounted in self-protected, inconspicuous positions.

3.03 TRAINING

A. Training shall include two (2) sessions arranged with the owner at least one week prior to the training date. Training manuals shall be provided for each participant with one additional copy for archiving and storage at the site. Duration of training sessions shall be a minim mum of two (2) hours each.

B. Training sessions by either the manufacturer or an authorized manufacturer's representative shall be videotaped for all applicable features, functions, programming and operations for owner's future reference.

C. As a minimum, training sessions shall consist of the following:

1. General project information and review shall be by the General Foreman or Superintendent of the Trade.
2. Specific system training with a detailed description of how the system will operate to meet the performance requirements of the CCTV system shall be by a Factory-Trained Representative and shall include:
    a. Record, playback, and image search routines.
    b. Start up, shut down, and reset procedures.
    c. Hands on training on all system hardware and features.
    d. Basic troubleshooting techniques.

3. Provide a troubleshooting guide to identify the source of system problems.

D. During the instruction period the Operating and Maintenance Manual shall be used and explained.

E. The Operating and Maintenance Manual material shall be bound in 3-ring binders and indexed. On the edge of the binder provide a clear see-through plastic holder with a typed card indicating the Project name, the Owner's name, the installer's name and the Volume number (e.g., Vol. No. 1 of 2).

F. Provide name, address, and telephone number of the manufacturer's representative and Service Company for all items supplied, so that the source of replacement parts and service can be readily obtained.

1. Include copies of manufacturers and installer's warranties and maintenance contracts, and performance bonds properly executed and signed by an authorized representative.

2. Include copies of all test reports and certifications.

3.04 SERVICE LEVEL AGREEMENTS (SLA'S)

A. The bidding contractor shall include pricing for a three (3) year SLA as part of the base bid and shall include the following procedures:

1. Windows upgrades/patches shall be installed and updated 2X per year to the Video management Server and Network Storage Devices and the devices.
2. Firmware u
3. tes shall be performed 2X per year to all of the cameras.

    a. This shall be a flash upgrade to all cameras on the tree via the Manager which resides on the Server(s). These upgrades will improve integration between the cameras and the Management software.

4. Physical Maintenance shall be performed 2X per year on all of the cameras within this specification and shall minimally include:

    a. Correct lens adjustments
    b. Verify heating elements
    c. Lens and enclosure cleaning

B. Obtain written receipts of acceptance close-out submittals submitted. Receipts shall specifically detail what is being delivered (description, quantity, and specification section) and shall be dated and signed by firm delivering materials, and by the Owner's Representative.

END OF SECTION 28 20 00

3.4 GEOTEXTILE/BENTONITE SHEET INSTALLATION

A. General: Install a continuous layer of waterproofing sheets with woven geotextile side directly against concrete to be waterproofed. Lap ends and edges a minimum of 4 inches on horizontal and vertical substrates. Stagger end joints between sheets a minimum of 24 inches. Fasten seams by stapling to adjacent sheet or nailing to substrate.

B. Below Structural Slabs-on-Grade: Place waterproofing sheets on compacted substrate with woven geotextile side up with ends and edges lapped and stapled.

1. Install a layer of waterproofing sheets under footings, grade beams, and pile caps; or continue waterproofing through key joints between footings and foundation walls, and extend a minimum of 8 inches up or beyond perimeter slab forms.

C. Concrete Walls: Starting at bottom of wall, apply waterproofing sheets horizontally with primary backing side against wall. Secure with powder-actuated fasteners or case-hardened, steel-cap masonry nails; spaced according to manufacturer's written instructions. Extend to bottom of footing, grade beam, or wall and secure as recommended in writing by manufacturer.

1. Termination at Grade: Extend waterproofing sheets to within 2 inches of finish grade, unless otherwise indicated. Secure top edge with termination bar. Apply sealant to top edge of termination bar.

D. Excavation Support and Protection (Permanent Shoring): Encase tieback rods, nuts, and plates, using bentonite mastic and waterproofing sheets, according to waterproofing manufacturer's written instructions for each configuration.

1. Install a layer of waterproofing sheets, with ends and edges lapped and nailed to shoring. Cover waterproofing with plastic protection sheets if needed for protection from precipitation; remove plastic sheets before placing concrete.
2. Inspect and repair waterproofing after reinforcing steel has been placed. Coordinate and control concrete placement to avoid damage to waterproofing.

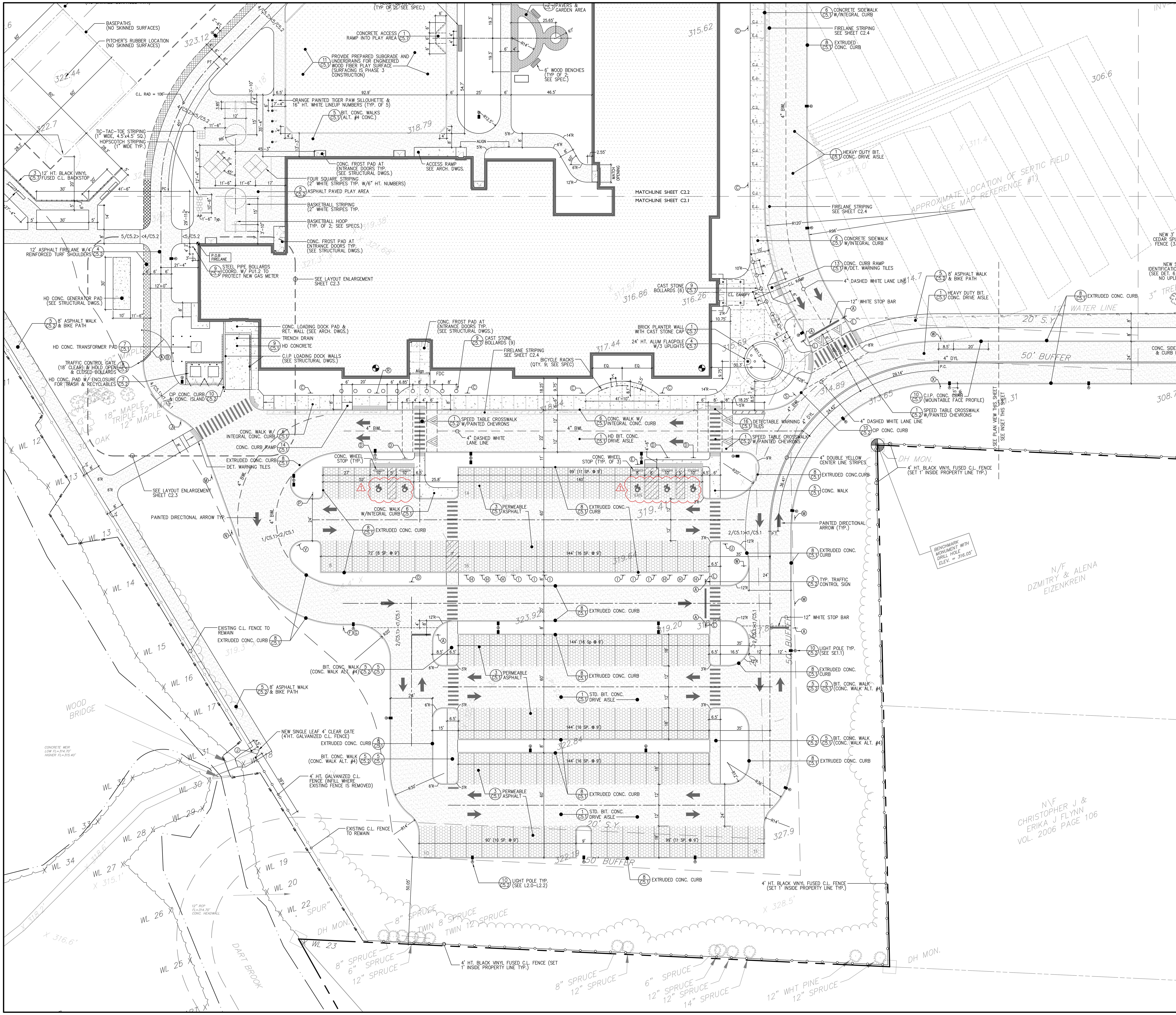
3.5 FIELD QUALITY CONTROL

A. Inspection: Arrange for manufacturer's representative to inspect completed installation and provide written report that installation complies with manufacturer's written instructions.

1. Remove and replace applications of bentonite waterproofing where inspection indicates that it does not comply with specified requirements.

B. Perform additional testing and inspecting, at Contractor's expense, to determine compliance of replaced or additional work with specified requirements.

END OF SECTION 07 17 16



KEY TO SIGNAGE:

A. "STOP"
B. "NO PARKING FIRE LANE" (w/ARROWS LEFT & RIGHT)
C. "NO PARKING FIRE LANE; STUDENT DROP-OFF ONLY" (w/ARROWS LEFT & RIGHT)
D. "ACCESSIBLE PARKING"
E. "ACCESSIBLE PARKING – VAN"
F. "ADDITIONAL VISITOR PARKING" (w/ARROW RIGHT)
G. "EXIT" (w/ARROW UP)
H. "RESERVED CAR POOL PARKING"
I. "RESERVED LOW EMISSION & FUEL EFFICIENT VEHICLE PARKING"
J. "CLOSED DURING SCHOOL HOURS"
K. "NO ENTRY BUSES ONLY"
L. "DO NOT ENTER"
M. "EXIT" (w/ARROW LEFT)
N. "ONE WAY" (LEFT)
O. "ONE WAY" (RIGHT)
P. "LEFT TURN ONLY"
Q. "SLOW PEDESTRIAN CROSSING"
R. "ACCESSIBLE LOADING ZONE"
S. "STUDENT DROP-OFF" (w/ARROW RIGHT)" AND "VISITOR PARKING" (w/ARROW LEFT)"
T. "NO ACCESS TO SCHOOL GROUNDS DURING SCHOOL HOURS"
U. "VISITOR PARKING" (w/ARROW RIGHT)
V. "VISITOR PARKING" (w/ARROW LEFT)
W. "NO RIGHT TURN"
X. "WE NEED YOU TO BUCKLE UP; SOUTH WINDSOR POLICE SERVICES"

BASE SURVEY PREPARED BY DESIGN PROFESSIONALS, INC. AUGUST 10, 2016

GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019
1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

160 West Street Suite E Cromwell, CT
T (860) 635-2877
F (860) 635-4226
LRC Engineering & Surveying, DPC
LRC Engineering and Surveying, LLC
LRC Environmental Services, Inc.
Land Resource Consultants, Inc.
Land Planning | Civil Engineering
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www.lrcconsult.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
SITE PLAN ENLARGEMENT SOUTH

DATE 11/2/2018

DWG. NO.
C2.1

MPN Project Number: 2017226.00

KEY TO SIGNAGE:

A. "STOP"
B. "NO PARKING FIRE LANE" (w/ARROWS LEFT & RIGHT)
C. "NO PARKING FIRE LANE; STUDENT DROP-OFF ONLY" (w/ARROWS LEFT & RIGHT)
D. "ACCESSIBLE PARKING"
E. "ACCESSIBLE PARKING – VAN"
F. "ADDITIONAL VISITOR PARKING" (w/ARROW RIGHT)
G. "EXIT" (w/ARROW UP)
H. "RESERVED CAR POOL PARKING"
I. "RESERVED LOW EMISSION & FUEL EFFICIENT VEHICLE PARKING"
J. "CLOSED DURING SCHOOL HOURS"
K. "NO ENTRY BUSES ONLY"
L. "DO NOT ENTER"
M. "EXIT" (w/ARROW LEFT)
N. "ONE WAY" (LEFT)
O. "ONE WAY" (RIGHT)
P. "LEFT TURN ONLY"
Q. "SLOW PEDESTRIAN CROSSING"
R. "ACCESSIBLE LOADING ZONE"
S. "STUDENT DROP-OFF" (w/ARROW RIGHT)" AND "VISITOR PARKING" (w/ARROW LEFT)"
T. "NO ACCESS TO SCHOOL GROUNDS DURING SCHOOL HOURS"
U. "VISITOR PARKING" (w/ARROW RIGHT)
V. "VISITOR PARKING" (w/ARROW LEFT)
W. "NO RIGHT TURN"
X. "WE NEED YOU TO BUCKLE UP; SOUTH WINDSOR POLICE SERVICES"

BASE SURVEY PREPARED BY DESIGN PROFESSIONALS, INC. AUGUST 10, 2016

GRAPHIC SCALE
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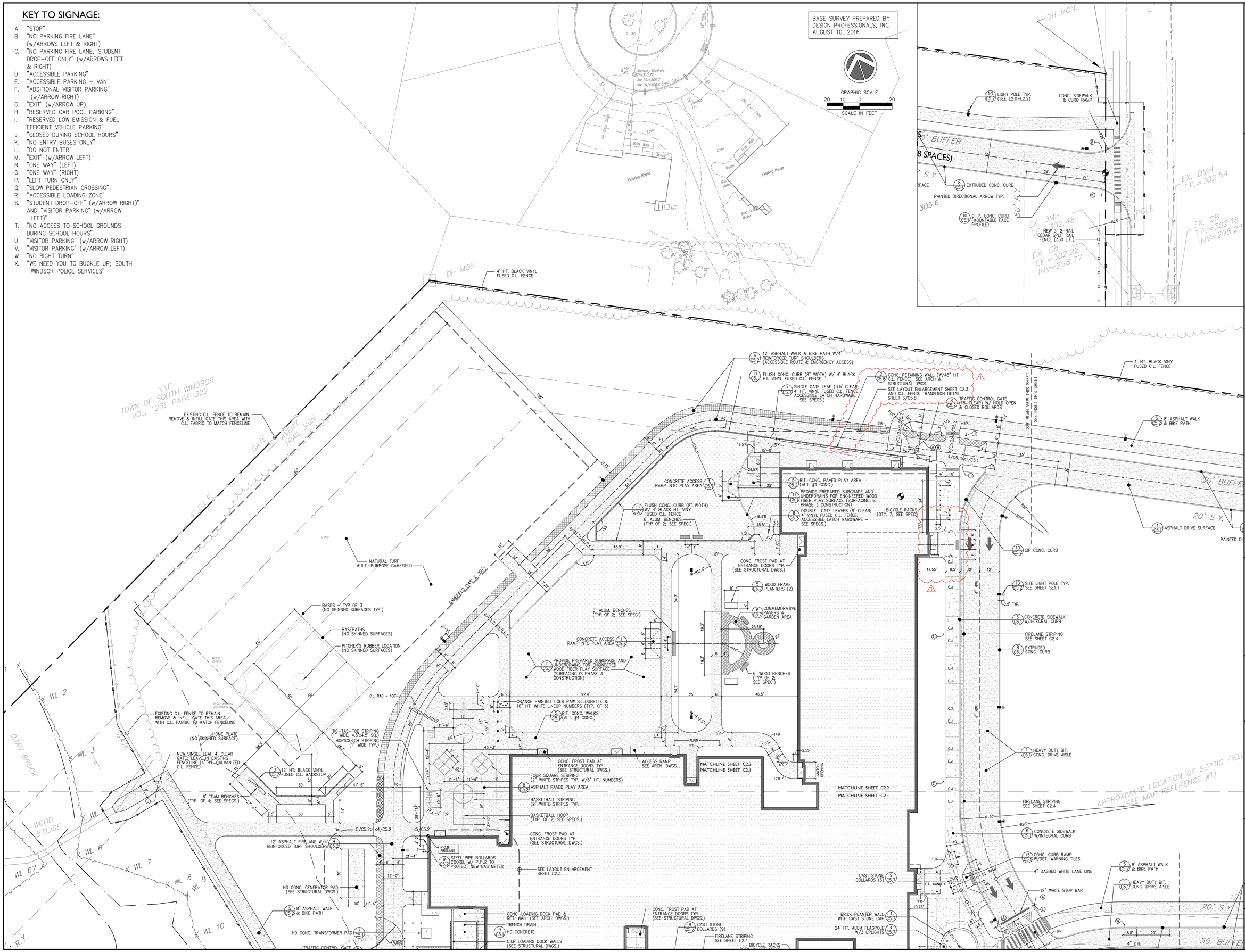
SCALE IN FEET



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PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

140 Wood Street
Suite E
Cromwell, CT
T (860) 635-2557
F (860) 635-2226
LRC Engineering & Surveying DPC
LRC Environmental Services, Inc.
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Land Planning | Civil/Site Engineering | Land Surveying
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www.lrcconsult.com

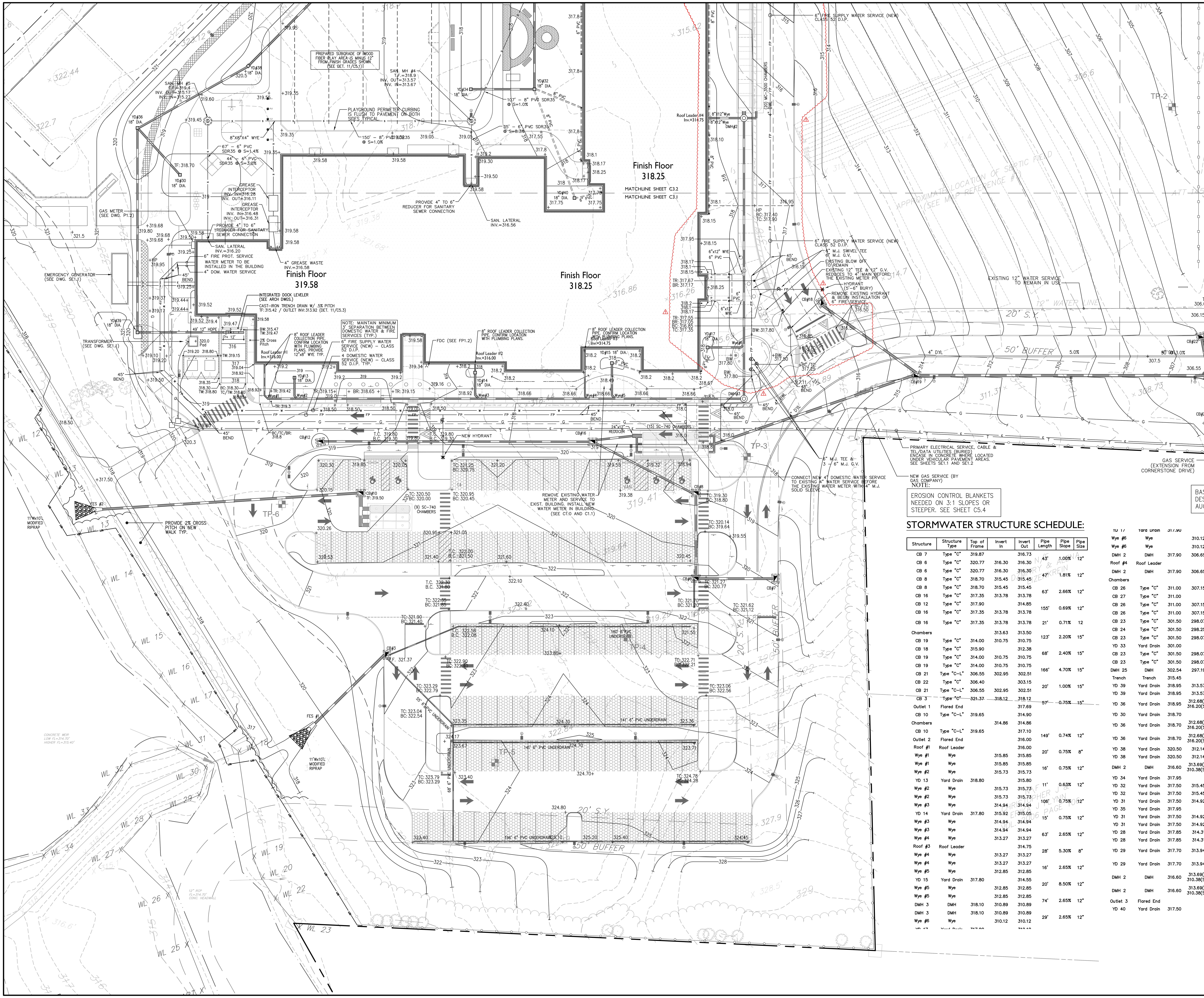
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
SITE PLAN ENLARGEMENT NORTH

DATE 11/2/2018

DWG. NO.
C2.2

MPN Project Number: 20172326.00



NOTE:

EROSION CONTROL BLANKETS NEEDED ON 3:1 SLOPES OR STEEPER. SEE SHEET C5.4

BASE SURVEY PREPARED BY DESIGN PROFESSIONALS, INC. AUGUST 10, 2016

STORMWATER STRUCTURE SCHEDULE:

Structure	Structure Type	Top of Frame	Invert In	Invert Out	Pipe Length	Pipe Slope	Pipe Size
CB 7	Type "C"	319.87		316.73	43'	1.00%	12"
CB 6	Type "C"	320.77	316.30	316.30			
CB 6	Type "C"	320.77	316.30	316.30	47'	1.81%	12"
CB 8	Type "C"	318.70	315.45	315.45			
CB 8	Type "C"	318.70	315.45	315.45	63'	2.66%	12"
CB 16	Type "C"	317.35	313.78	313.78			
CB 12	Type "C"	317.90		314.85	155'	0.69%	12"
CB 16	Type "C"	317.35	313.78	313.78			
CB 16	Type "C"	317.35	313.78	313.78	21'	0.71%	12
Chambers			313.63	313.50	123'	2.20%	15"
CB 19	Type "C"	314.00	310.75	310.75			
CB 18	Type "C"	315.90		312.38	68'	2.40%	15"
CB 19	Type "C"	314.00	310.75	310.75			
CB 19	Type "C"	314.00	310.75	310.75	166'	4.70%	15"
CB 21	Type "C–L"	306.55	302.95	302.51			
CB 22	Type "C"	306.40		303.15	20'	1.00%	15"
CB 21	Type "C–L"	306.55	302.95	302.51			
CB 3	Type "C"	321.37	318.12	318.12	57'	0.75%	15"
Outlet 1	Flared End			317.69			
CB 10	Type "C–L"	319.65		314.90			
Chambers			314.86	314.86			
CB 10	Type "C–L"	319.65		317.10	149'	0.74%	12"
Outlet 2	Flared End			316.00			
Roof #1	Roof Leader			316.00	20'	0.75%	8"
Wye #1	Wye		315.85	315.85			
Wye #1	Wye		315.85	315.85	16'	0.75%	12"
Wye #2	Wye		315.73	315.73			
YD 13	Yard Drain	318.80		315.80	11'	0.63%	12"
Wye #2	Wye		315.73	315.73			
Wye #2	Wye		315.73	315.73	106'	0.75%	12"
Wye #3	Wye		314.94	314.94			
YD 14	Yard Drain	317.80	315.92	315.05	15'	0.75%	12"
Wye #3	Wye		314.94	314.94			
Wye #3	Wye		314.94	314.94	63'	2.65%	12"
Wye #4	Wye		313.27	313.27			
Roof #3	Roof Leader			314.75	28'	5.30%	8"
Wye #4	Wye		313.27	313.27			
Wye #4	Wye		313.27	313.27	16'	2.65%	12"
Wye #5	Wye		312.85	312.85			
YD 15	Yard Drain	317.80		314.55	20'	8.50%	12"
Wye #5	Wye		312.85	312.85			
Wye #5	Wye		312.85	312.85	74'	2.65%	12"
DMH 3	DMH	318.10	310.89	310.89			
DMH 3	DMH	318.10	310.89	310.89	29'	2.65%	12"
Wye #6	Wye		310.12	310.12			
YD 17	Yard Drain	317.90		312.12	20'	10.00%	12"
Wye #6	Wye		310.12	310.12			
Wye #6	Wye		310.12	310.12	131'	2.65%	12"
DMH 2	DMH	317.90	306.65	306.65			
Roof #4	Roof Leader			314.75	19'	13.40%	8"
DMH 2	DMH	317.90	306.65	306.65			
Chambers				308.00	85'	1.00%	15"
CB 26	Type "C"	311.00	307.15	307.15			
CB 27	Type "C"	311.00		307.77	16'	3.90%	15"
CB 26	Type "C"	311.00	307.15	307.15			
CB 26	Type "C"	311.00	307.15	307.15	200'	4.50%	15"
CB 23	Type "C"	301.50	298.07	298.07			
CB 24	Type "C"	301.50	298.25	298.25	18'	1.00%	15"
CB 23	Type "C"	301.50	298.07	298.07			
YD 33	Yard Drain	301.00		298.42	7'	5.00%	12"
CB 23	Type "C"	301.50	298.07	298.07			
CB 23	Type "C"	301.50	298.07	298.07	39'	2.25%	15"
DMH 25	DMH	302.54	297.19	–			
Trench	Trench	315.45		313.95	49'	0.78%	12"
YD 39	Yard Drain	318.95	313.57	313.57			
YD 39	Yard Drain	318.95	313.57	313.57	118'	0.75%	12"
YD 36	Yard Drain	318.95	312.68(S) 316.20(SE)	312.68			
YD 30	Yard Drain	318.70		316.55	35'	1.00%	12"
YD 36	Yard Drain	318.70	312.68(S) 316.20(SE)	312.68			
YD 36	Yard Drain	318.70	312.68(S) 316.20(SE)	312.68	72'	0.75%	12"
YD 38	Yard Drain	320.50	312.14	312.14			
YD 38	Yard Drain	320.50	312.14	312.14	235'	0.75%	12"
DMH 2	DMH	316.60	313.69(S) 310.38(SW)	310.38			
YD 34	Yard Drain	317.95		315.81	36'	1.00%	12"
YD 32	Yard Drain	317.50	315.45	315.45			
YD 32	Yard Drain	317.50	315.45	315.45	53'	1.00%	12"
YD 31	Yard Drain	317.50	314.92	314.92			
YD 35	Yard Drain	317.95		315.80	36'	2.44%	12"
YD 31	Yard Drain	317.50	314.92	314.92			
YD 31	Yard Drain	317.50	314.92	314.92	61'	1.00%	12"
YD 28	Yard Drain	317.85	314.31	314.31			
YD 28	Yard Drain	317.85	314.31	314.31	37'	1.00%	12"
YD 29	Yard Drain	317.70	313.94	313.94			
YD 29	Yard Drain	317.70	313.94	313.94	25'	1.00%	12"
DMH 2	DMH	316.60	313.69(S) 310.38(SW)	310.38			
DMH 2	DMH	316.60	313.69(S) 310.38(SW)	310.38	138'	0.75%	12"
Outlet 3	Flared End			309.35			
YD 40	Yard Drain	317.50		316.11	66'	1.00%	8"

GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

MPN Project Number: 2017226.00

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PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

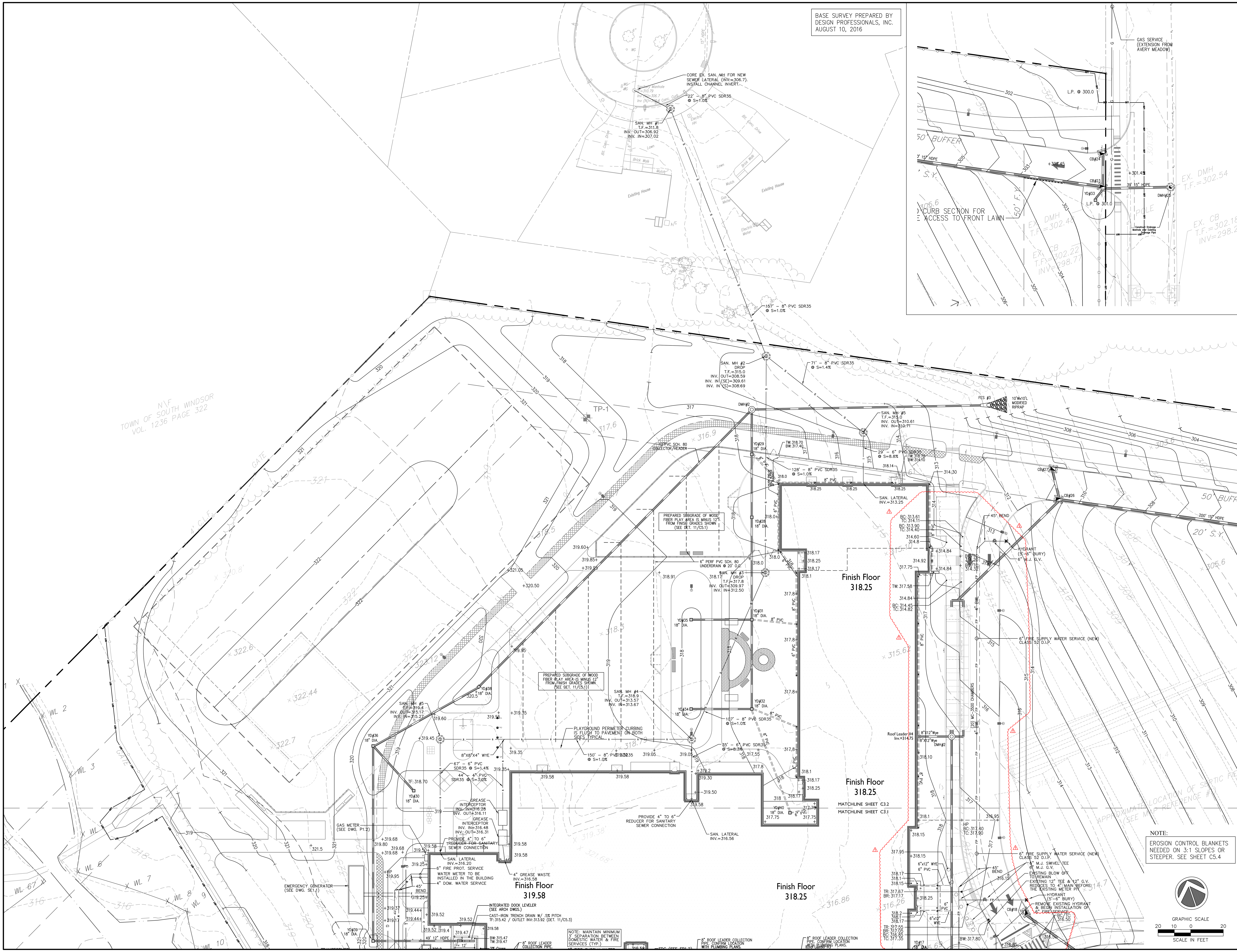
LRC GROUP
160 West Street, Suite E, Cromwell, CT
T (860) 635-2877 F (860) 635-2877
Land Planning | Civil Engineering | Landscape Architecture | Environmental Services | Land Survey

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE
GRADING & UTILITIES PLAN ENLARGEMENT SOUTH

DATE 11/2/2018

DWG. NO.
C3.1



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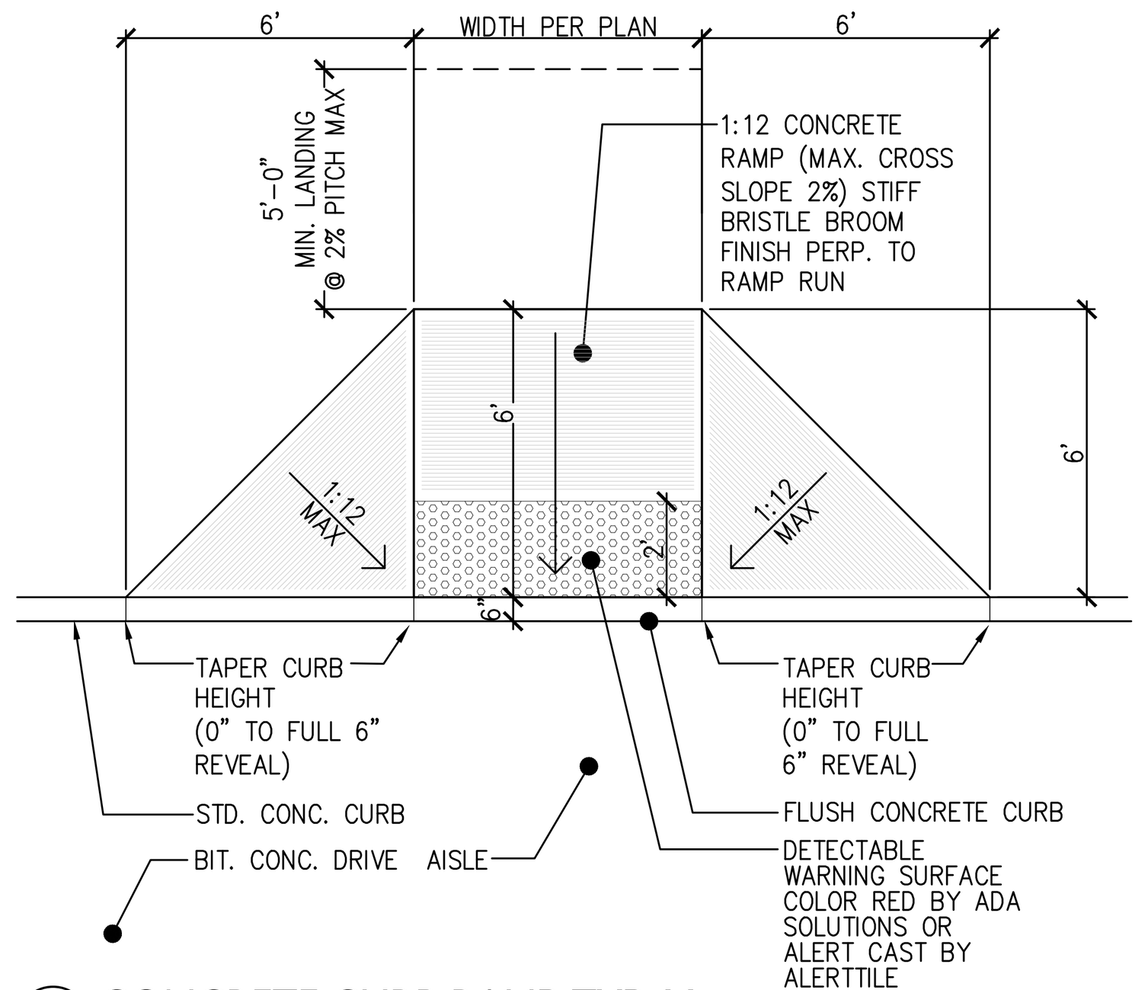
949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
GRADING & UTILITIES PLAN ENLARGEMENT NORTH

DATE 11/2/2018

DWG. NO.
C3.2



13 **CONCRETE CURB RAMP-TYP. X**
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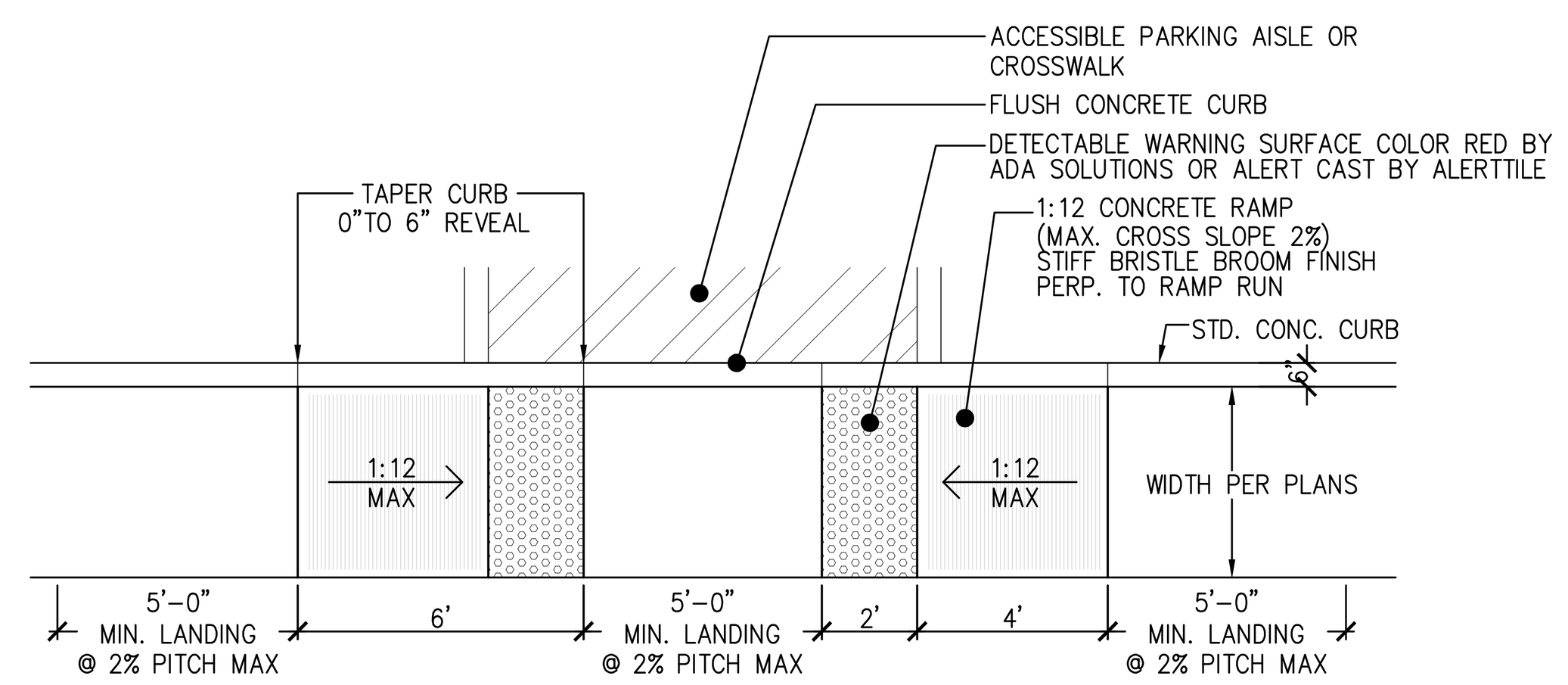

14 **CONCRETE CURB RAMP - TYPE A**
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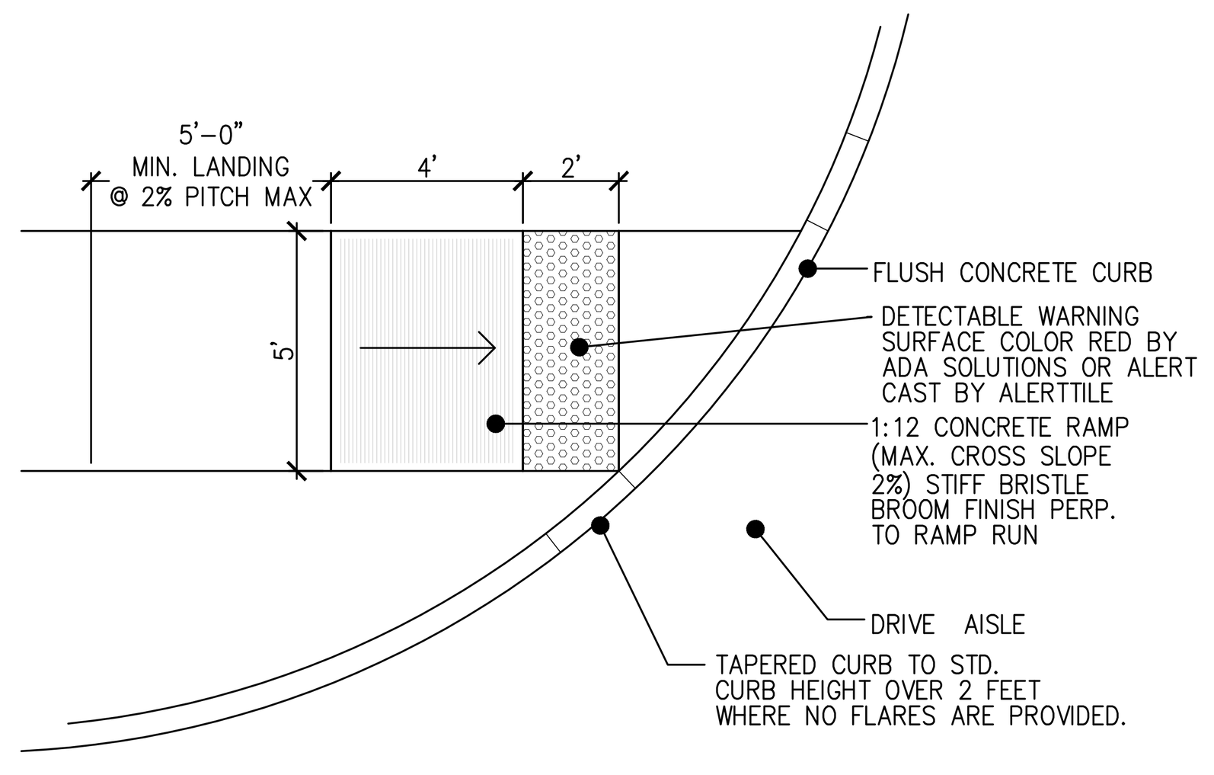

15 **CONCRETE CURB RAMP TYPE B**
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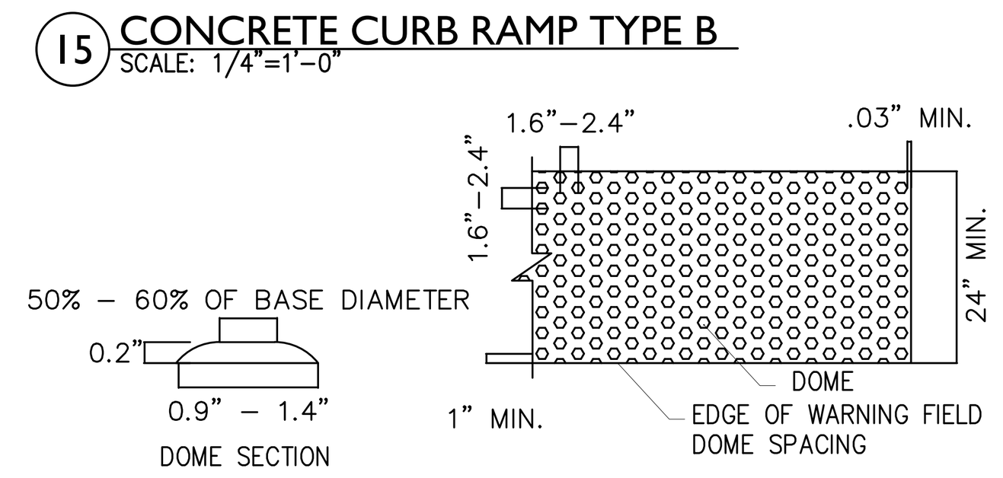


NOTES:

1. THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE, THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING UNIT (THE DOMES AND THE ENTIRE 24" LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.

2. THE SIZE OF THE DETECTABLE WARNING FIELD SHALL BE 24" IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

3. THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP LANDING OR CURB RAMP AND THE STREET.

4. WHERE DOMES ARE ARRAYED RADIALLY THEY MAY DIFFER IN DOME DIAMETER AND CENTER–TO– CENTER SPACING WITHIN THE RANGES SPECIFIED ON THIS SHEET.

5. THE DETECTABLE WARNING FIELD SHALL BE THE COLOR SPECIFIED IN THE CONTRACT DOCUMENTS OR MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

6. DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE OR CORNER OF THE WARNING FIELD NEAREST TO THE ROADWAY IS 5" TO 9" FROM THE FRONT OF THE CURB OR THE ROADWAY EDGE (12" WHERE TRAVERSABLE CURB IS USED). INSTALL THE DETECTABLE WARNING FIELD BEHIND THE FLUSH CURB.

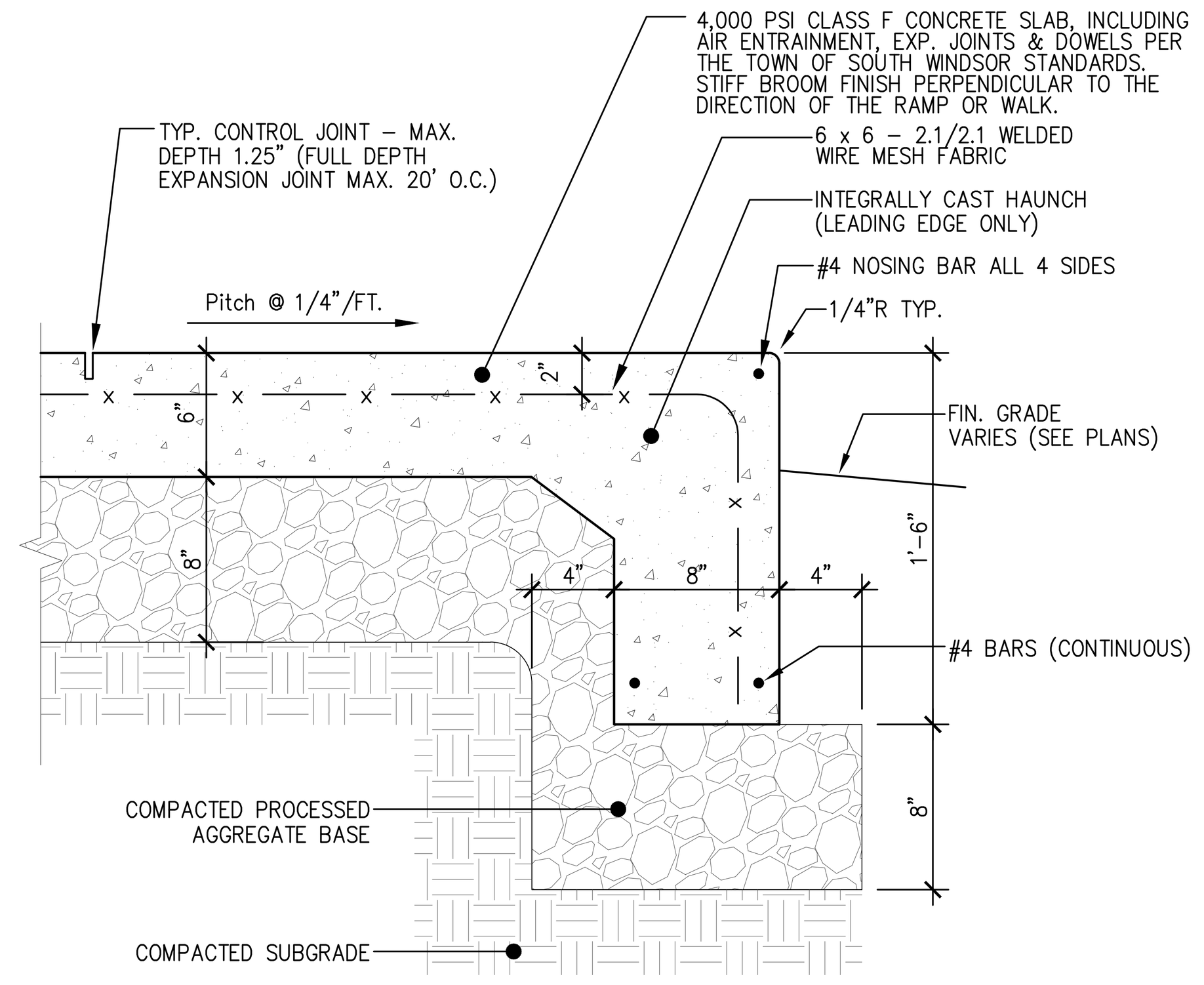
7. THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 6'–0" MINIMUM AND 15'–0" MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL.

DETECTABLE WARNING TILE SPECS

24" WIDE "ARMOR TILE" TACTILE WARNING (2.35" DOME SPACING) CAST INTO CONC. PAD PER MANUFACTURER'S INSTRUCTIONS
(COLOR: –)

NOTE: UNIT SIZE FOR RECTANGULAR APPLICATIONS IS 24"x24" AND FOR RADIAL APPLICATIONS IS 18"x24"

16 **DETECTABLE WARNING STRIP**
SCALE: 1/2"=1'-0"



9 **H.D. CONC. PAD W/ HAUNCH**
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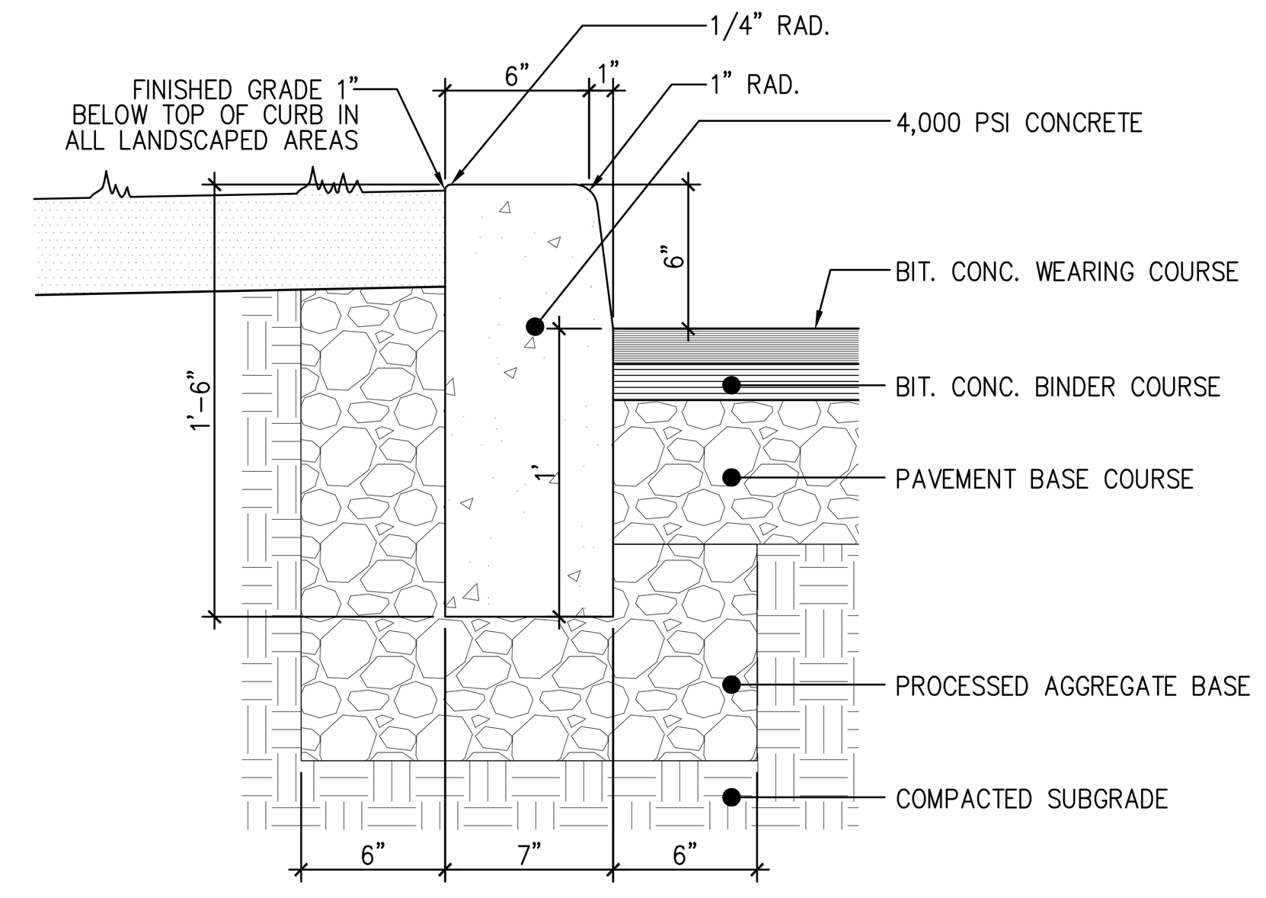

10 **CAST-IN-PLACE CONCRETE CURB**
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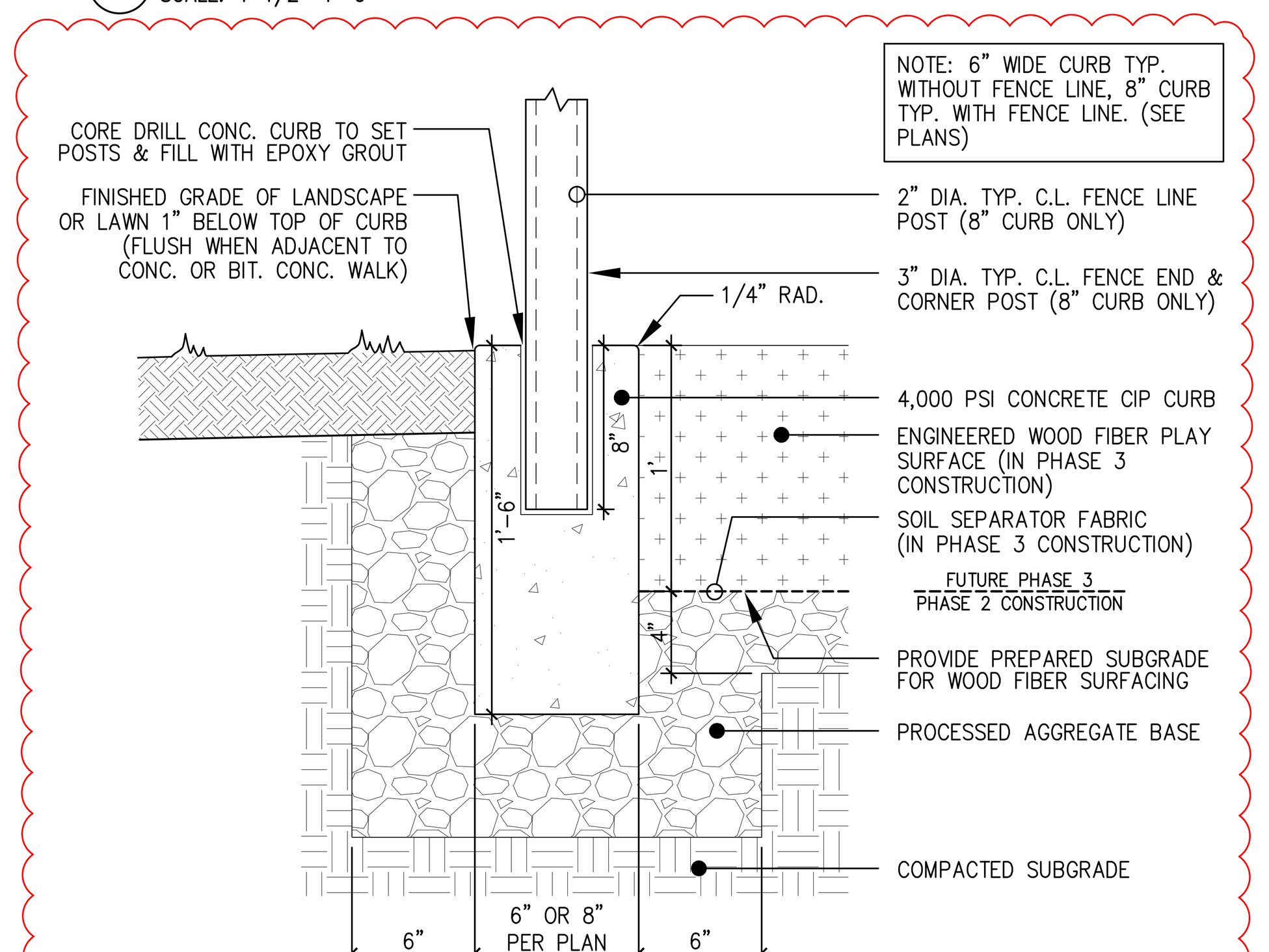

11 **WOOD FIBER PLAYGROUND SURFACE W/ CONC. CURB EDGE**
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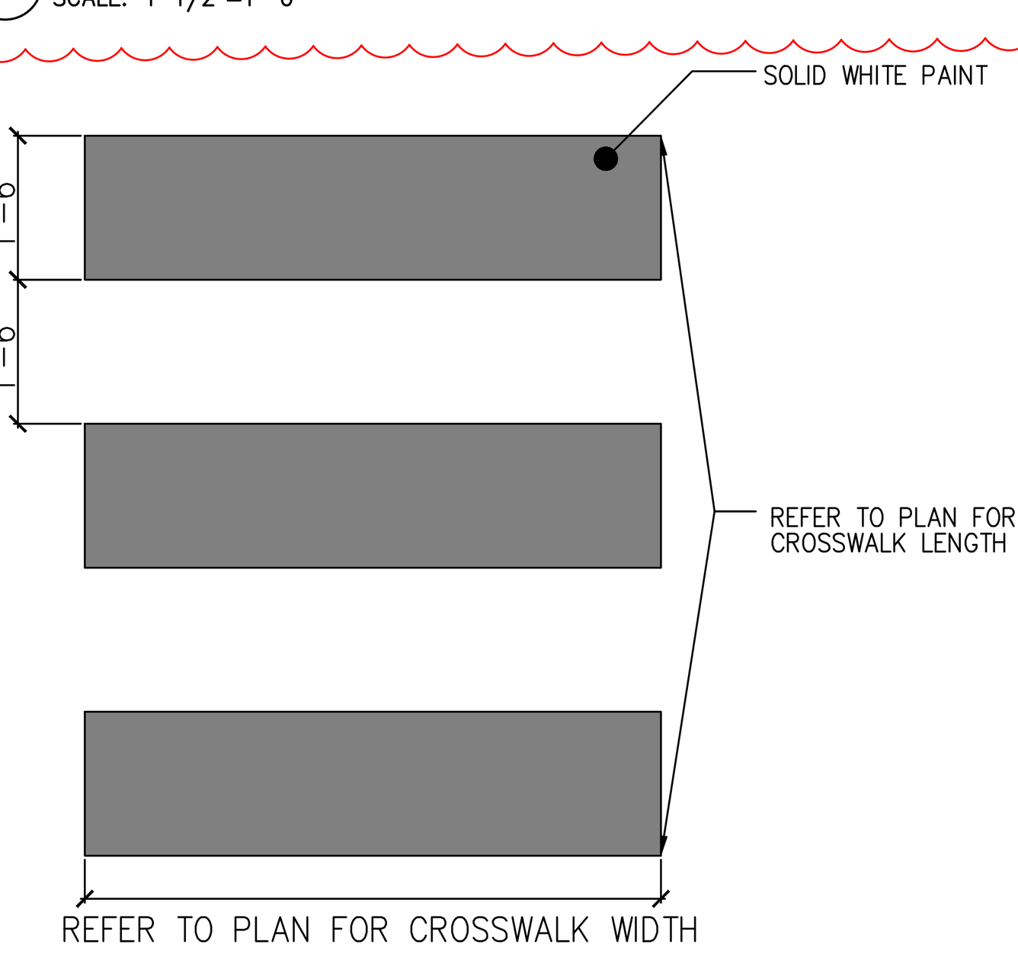

12 **TYP. CROSSWALK STRIPING**
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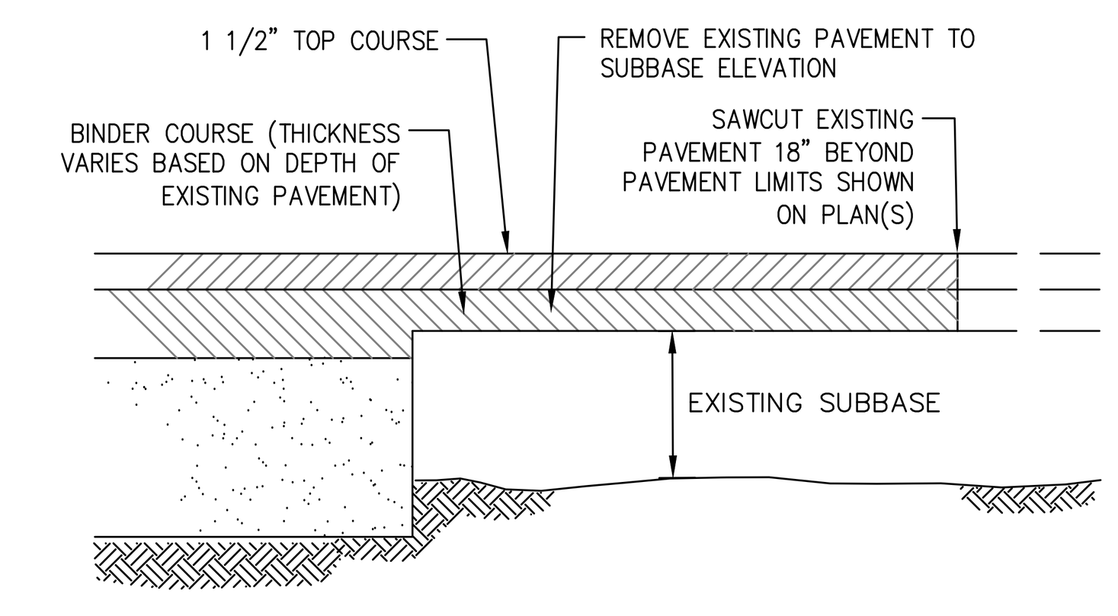

4 **BIT. CONC. PAVEMENT (NEW-EX. TRANSITION)**
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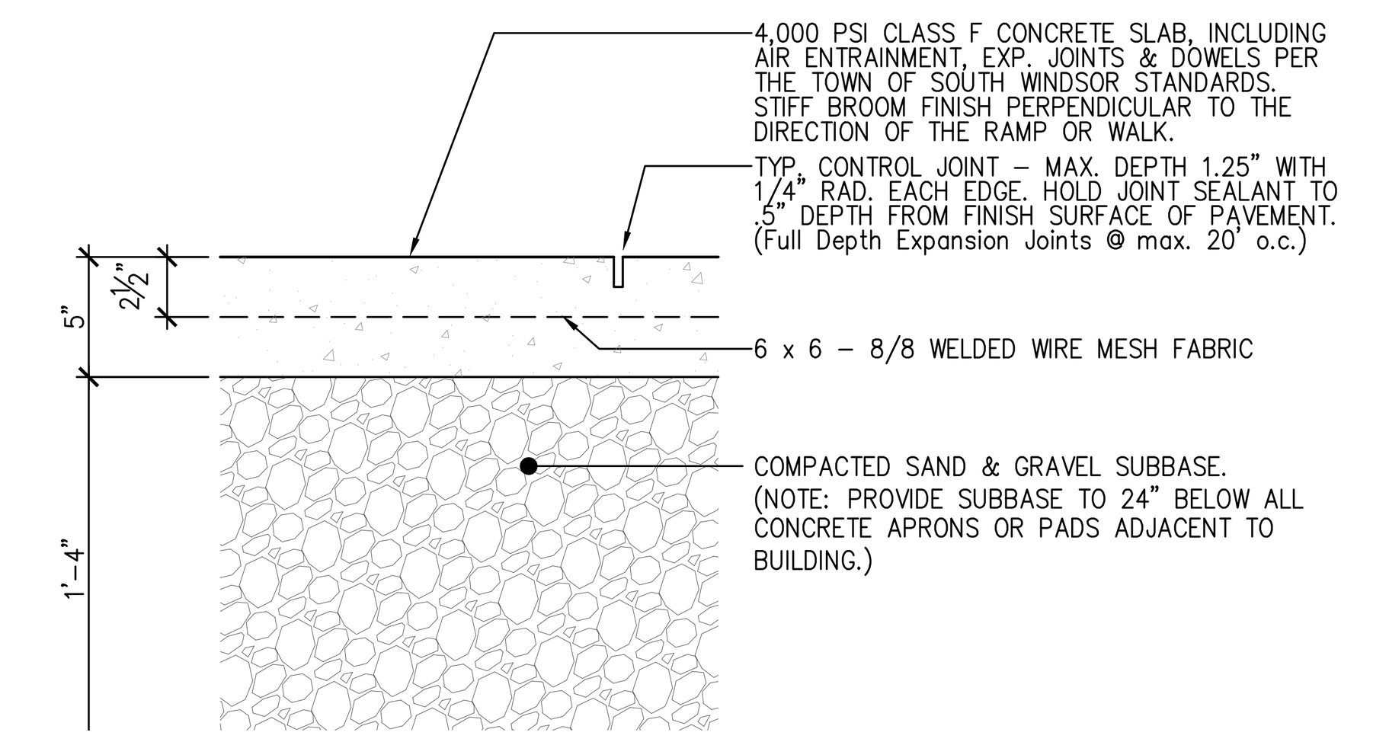

5 **CONCRETE WALK**
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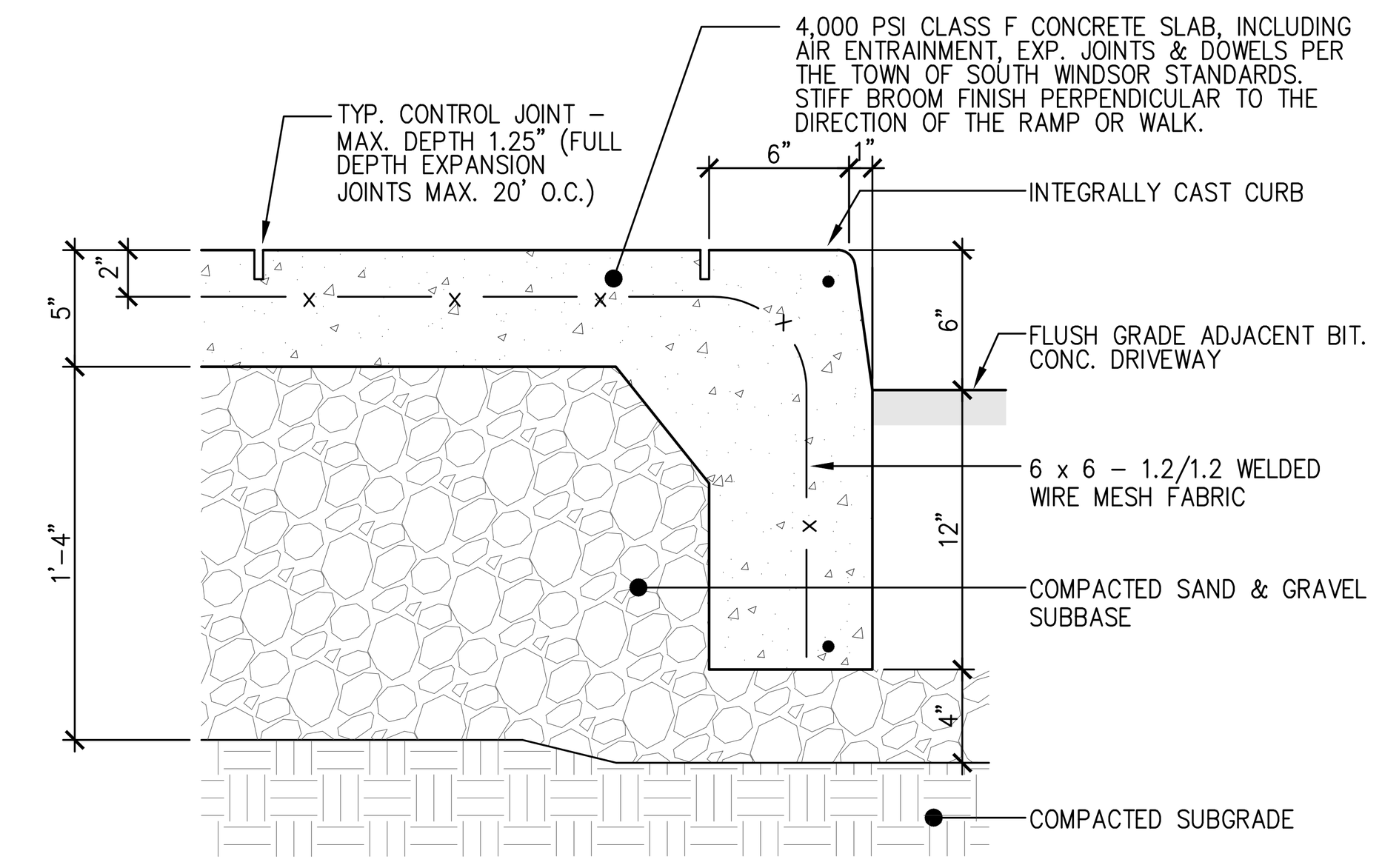
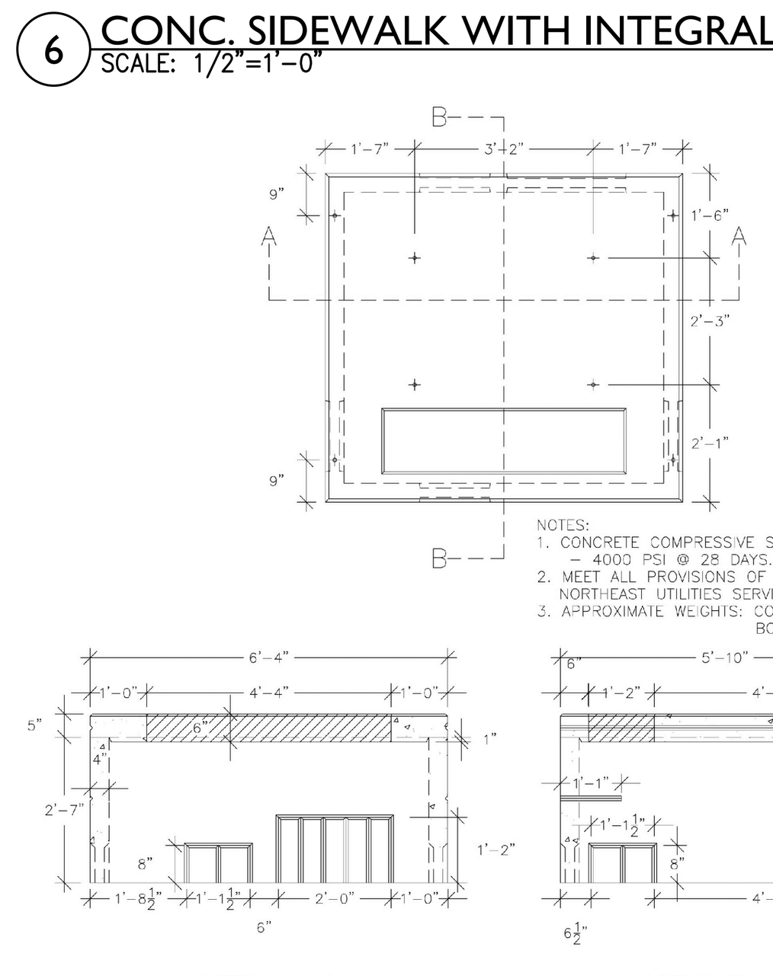
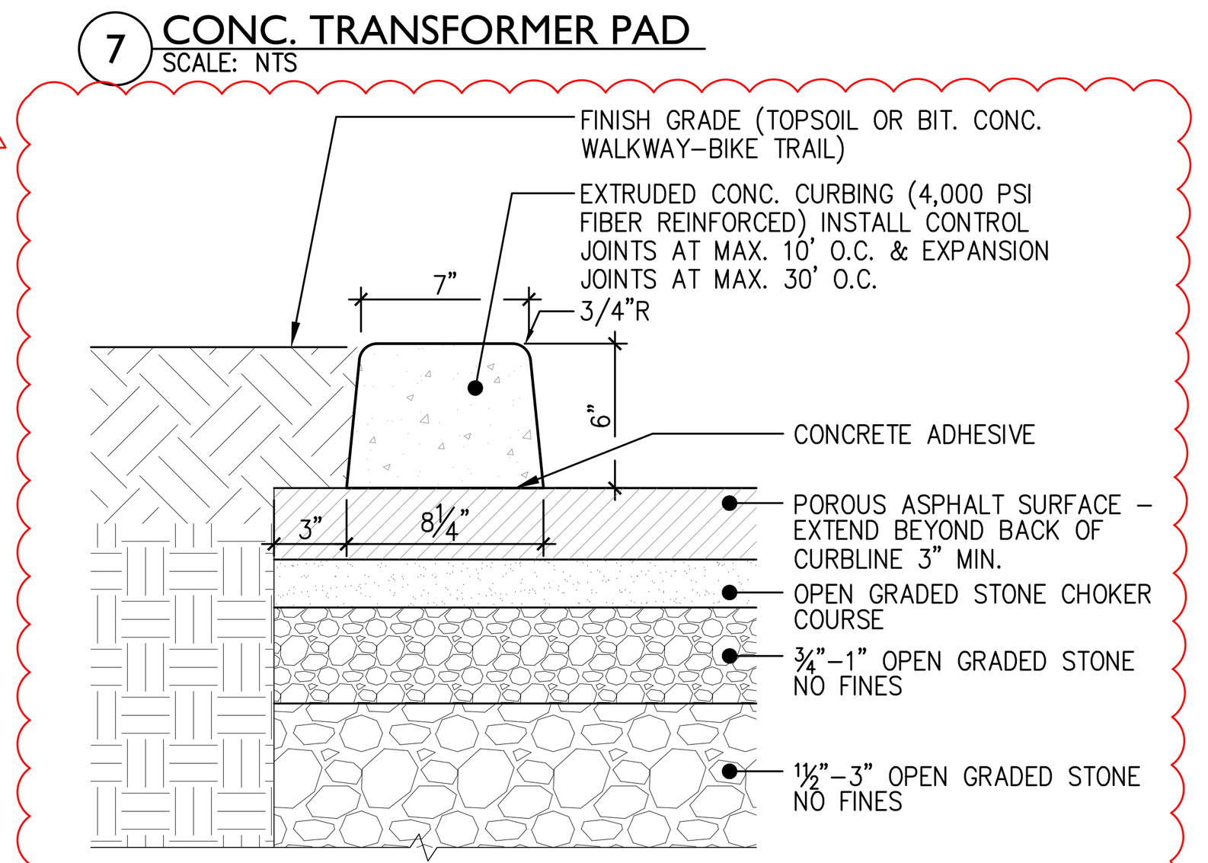
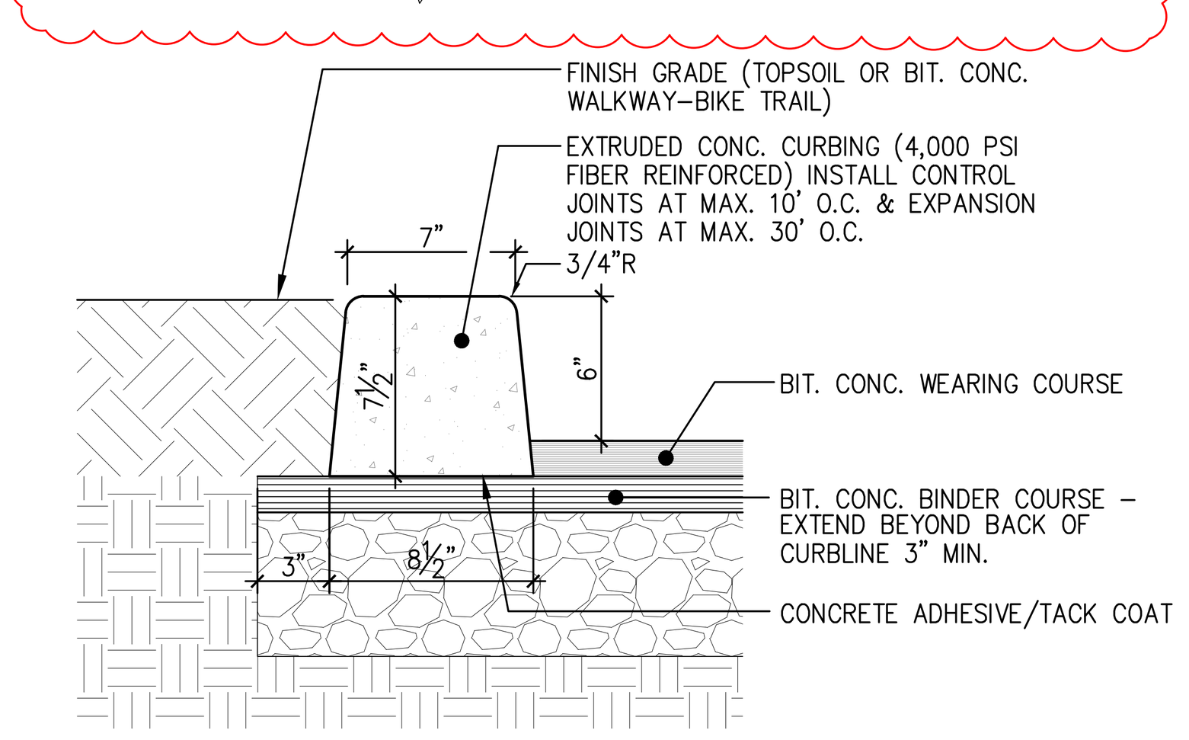


6 **CONC. SIDEWALK WITH INTEGRAL CURB**
SCALE: 1/2"=1'-0"



7 **CONC. TRANSFORMER PAD**
SCALE: NTS





8 **EXTRUDED CONC. CURB**
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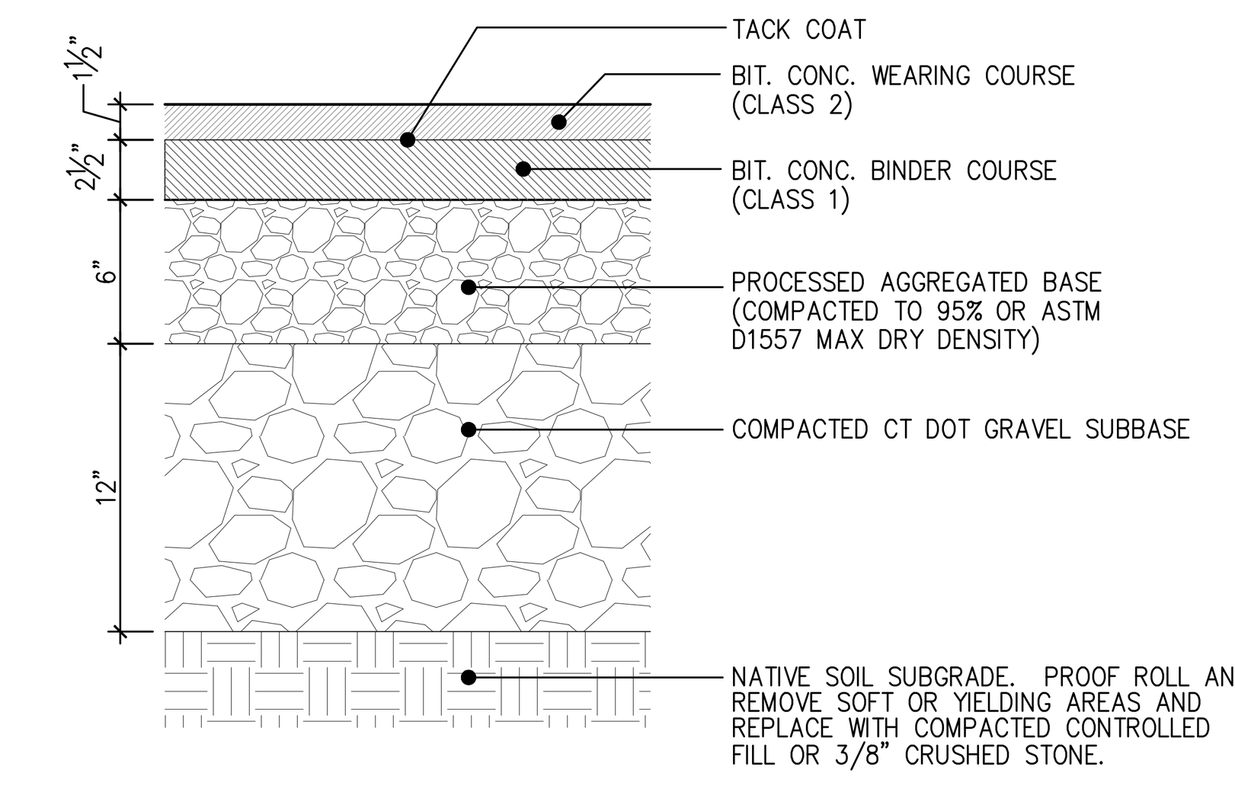
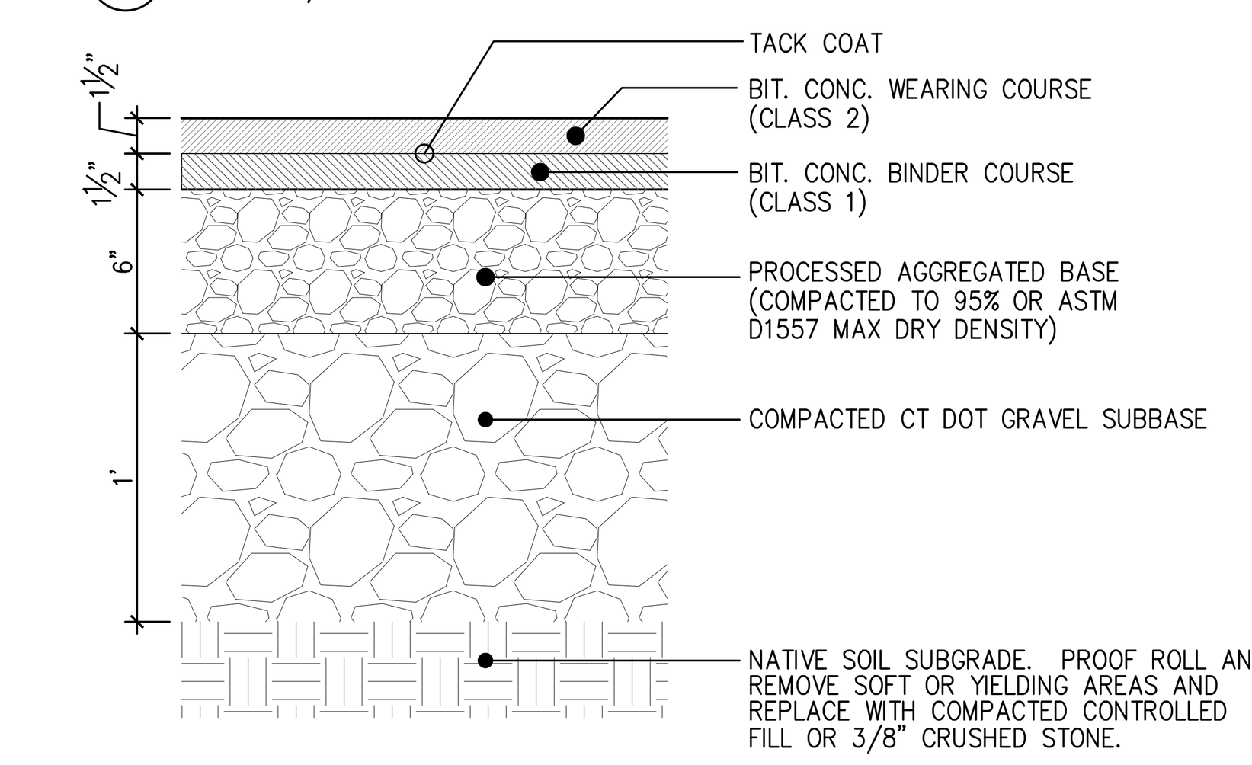


1 **BIT. CONC. PAVEMENT H.D. (DRIVE AISLES)**
SCALE: 1-1/2"=1'-0"



2 **BIT. CONC. PAVEMENT STD.**
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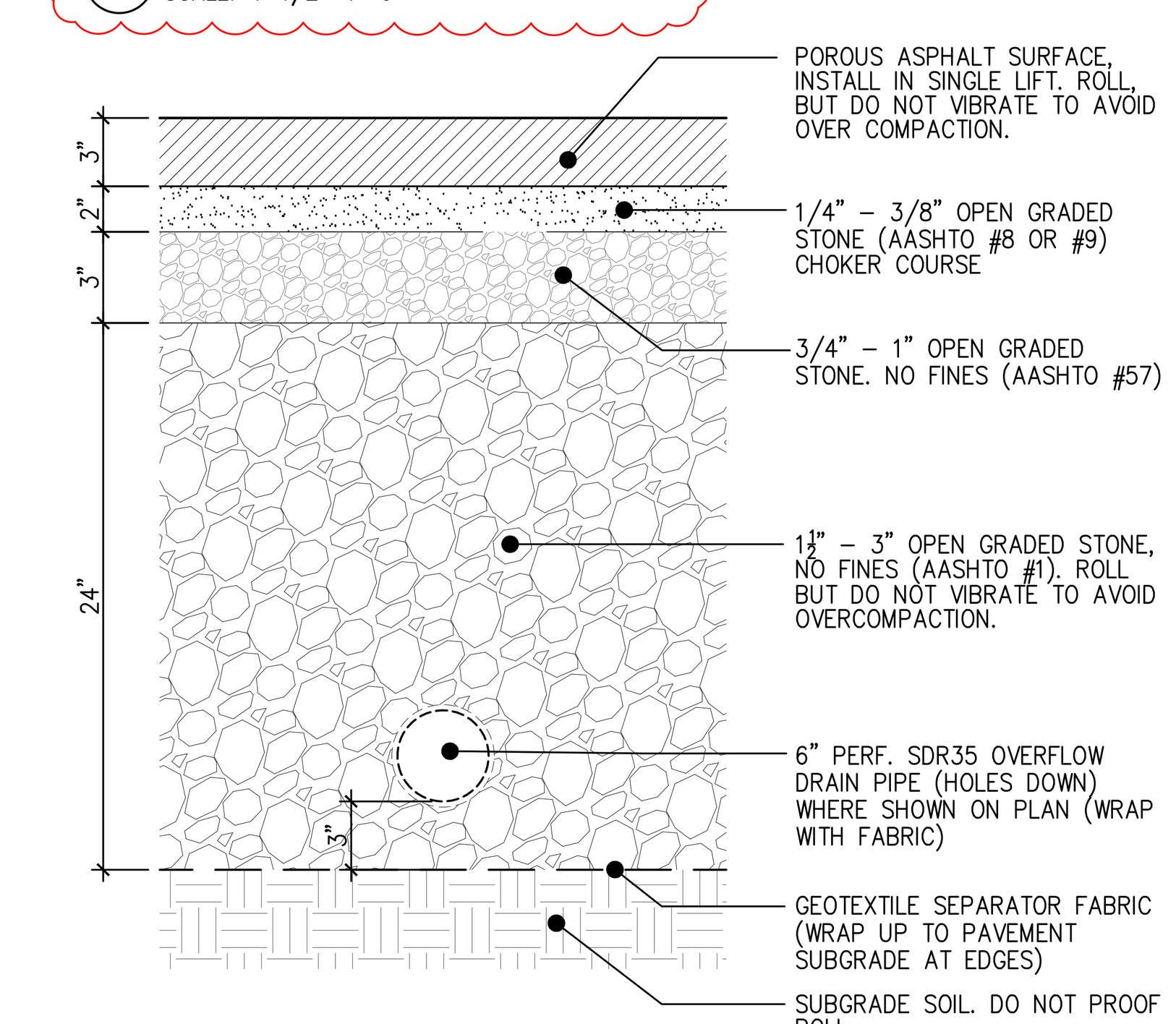


3 **BIT. CONC. PAVEMENT PERMEABLE**
SCALE: 1-1/2"=1'-0"

POROUS PAVEMENT CONSTRUCTION GUIDELINES

1. PAVEMENT SPEC PER NAPA SERIES 131 OR CT DOT APPROVED EQUAL AGGREGATE MIX:

3/4" (19 mm)	100 %
1/2 " (12.5 mm)	85–100 %
3/8 " (9.5 MM)	55–75%
#4 (4.75 MM)	10–25 %
# 8 (2.36 MM)	5–10%
# 200 (0.075 MM)	2–4%

AIR VOIDS BY ASTM D3203 MIN 16%

ASPHALT CONTENT 5.75% TO 6% BY WEIGHT OF TOTAL MIX.
DRAINDOWN OF 0.3 % MAXIMUM IN ACCORDANCE WITH ASTM D6390–05.
USE NEAT ASPHALT BINDER MODIFIED WITH ELASTOMETRIC POLYMER TO PRODUCE BINDER MEETING THE REQUIRMENTS OF PG–76–22. THE ELASTIC POLYMER SHALL BE STYREME–BUTADIENE–STYRENE (SBS), OR APPROVED EQUAL, APPLIED AT A RATE OF 3% BY TOTAL WEIGHT OG THE BINDER. THE COMPOSITION MATERIAL SHALL BE THOROUGHLY BLENDED AT THE ASPHALT REFINERY OR TERMINAL PRIOR TO BEING LOADED INTO THE TRANSPORT VEHICLE. THE POLYMER MODIFIED BINDER SHALL BE HEAT AND STARAGE STABLE.

ADD HYDRATED LIME AT A DOSAGE RATE OF 1.0% BY WEIGHT OF THE TOTAL DRY AGGREGATE TO MIXES CONTAINING GRANITE. HYDRATED LIME SHALL MEET THE REQUIREMENTS OF ASTM C 977. THE ADDITIVE MUST BE ABLE TO PREVENT THE SEPARATION OF THE ASPHALT BINDER FROM THE AGGREGATE AND ACHIEVE A REQUIRED TENSILE STRENGTH RATIO (TSR) OF AT LEAST 80% OF THE ASPHALT MIX.

2. THE SUBGRADE CANNOT BE OVERLY COMPACTED WITH THE INCLUSION OF FINE PARTICULATES.

3. WEATHER CONDITIONS AT THE TIME OF INSTALLATION CAN AFFECT THE FINAL PRODUCT. EXTREMELY HIGH OR LOW TEMPERATURES SHOULD BE AVOIDED DURING CONSTRUCTION OF PERVIOUS ASPHALT AND CONCRETE PAVEMENTS. TEMPERATURE AT THE TIME OF POROUS PAVEMENT INSTALLTION MUST BE GREATER THAN 50 DEGREES AND LESS THAN 90 DEGREES.

4. AREAS FOR POROUS PAVEMENT SYSTEMS SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.

5. IF AREAS CANNOT BE AVOIDED DURING THE CONSTRUCTION OF THE SURROUNDING AREAS OR THE EXCAVATION FOR THE INSTALLATION OF THE STONE RECHARGE BED, THE CONTRACTOR SHOULD DE–COMPACT THE EXISTING SUBBASE.

6. UPSTREAM CONSTRUCTION SHALL BE COMPLETED AND STABILIZED BEFORE CONTRIBUTING RUNOFF TO POROUS PAVEMENT SYSTEM. A DENSE AND VIGOROUS VEGETATIVE COVER SHALL BE ESTABLISHED OVER ANY CONTRIBUTING PERVIOUS DRAINAGE AREAS BEFORE RUNOFF CAN BE ACCEPTED INTO THE FACILITY.

7. SUBSURFACE AREA SHOULD BE EXCAVATED TO PROPOSED DEPTH. EXISTING SUBGRADE SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT PRIOR TO PLACEMENT OF GEOTEXTILE AND STONE BED. WHERE EROSION OF SUBGRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT AND LIGHT TRACTOR.

8. PLACE GEOTEXTILE AND RECHARGE BED AGGREGATE IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION TO PREVENT ACCUMULATION OF DEBRIS OR SEDIMENT. PREVENT RUNOFF AND SEDIMENT FROM ENTERING THE STORAGE BED DURING THE PLACEMENT OF THE GEOTEXTILE AND AGGREGATE BED.

9. PLACE GEOTEXTILE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDATIONS. ADJACENT STRIPS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF 16 INCHES. FABRIC SHALL BE SECURED AT LEAST 4 FEET OUTSIDE OF BED.

10. THIS EDGE STRIP SHOULD REMAIN IN PLACE UNTIL ALL BARE SOILS CONTIGUOUS TO BEDS ARE STABILIZED AND VEGETATED.

11. AS THE SITE IS FULLY STABILIZED, EXCESS GEOTEXTILE CAN BE CUT BACK TO THE EDGE OF THE BED.

12. INSTALL AGGREGATE COURSE IN LIFTS OF 6–8 INCHES. KEEP EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.

13. MAINTENANCE:
A) SURFACE INFILTRATION RATES SHALL BE INSPECTED ANNUALLY DURING RAIN EVENTS FOR ANY CHANGES IN INFILTRATION.
B) TO MINIMIZE CLOGGING OF THE PAVEMENT, THE PAVEMENT SHOULD BE VACUUMED TWO TO FOUR TIMES A YEAR TO REMOVE ANY SOLIDS OF DEBRIS OR POWER WASHED AS NECESSARY.
C) DEICING CHEMICALS MAY BE USED DURING WINTER TO AID IN SNOW MELT. SAND SHOULD BE SPARINGLY USED.
D) PERVIOUS PAVEMENT SHOULD NEVER BE SEALCAOTED OR CRACK SEALED.

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019
1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

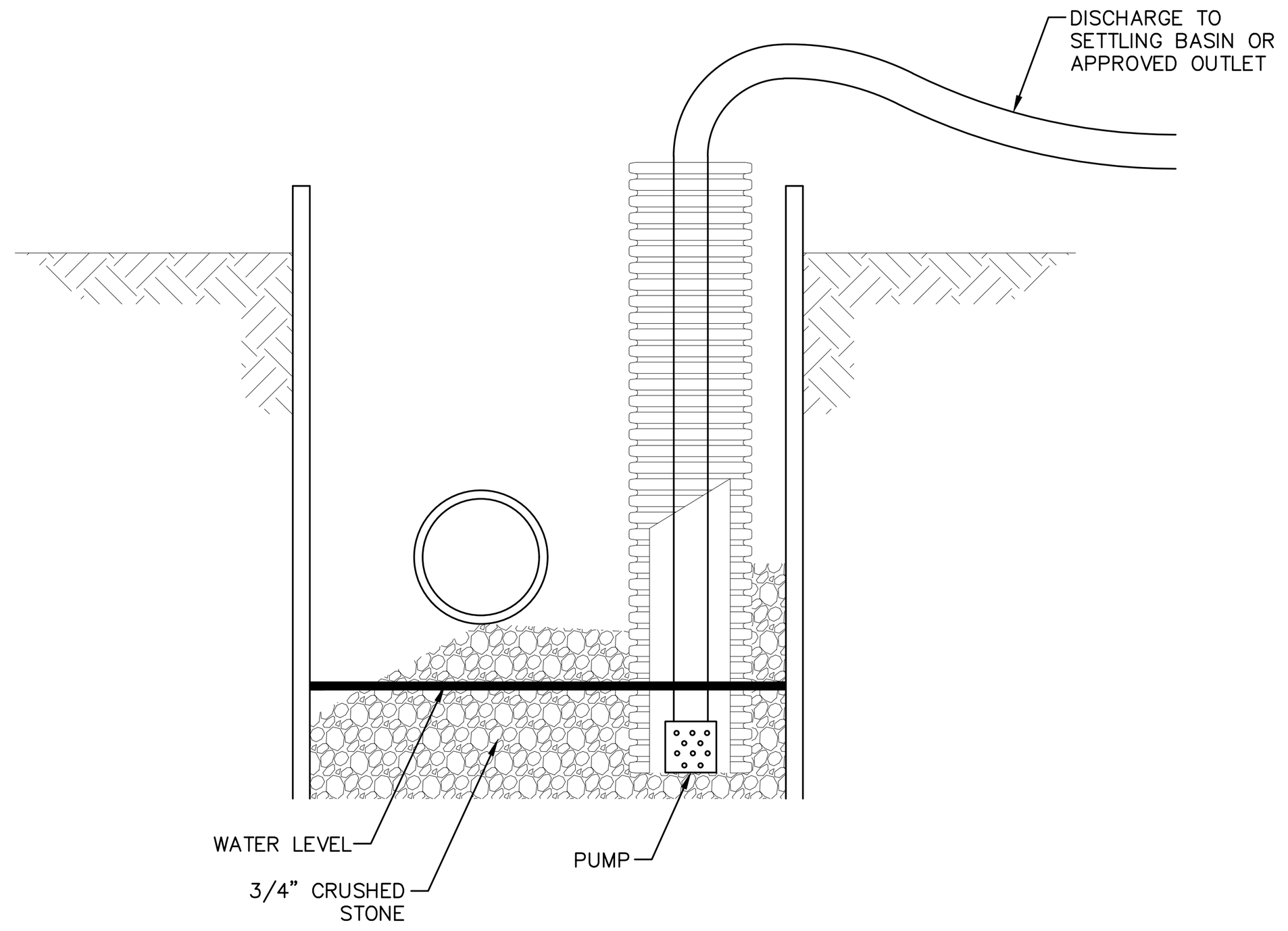
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE WETHERSFIELD, CT 06109 (860) 563-6164

TITLE
SITE DETAILS

DATE 11/2/2018

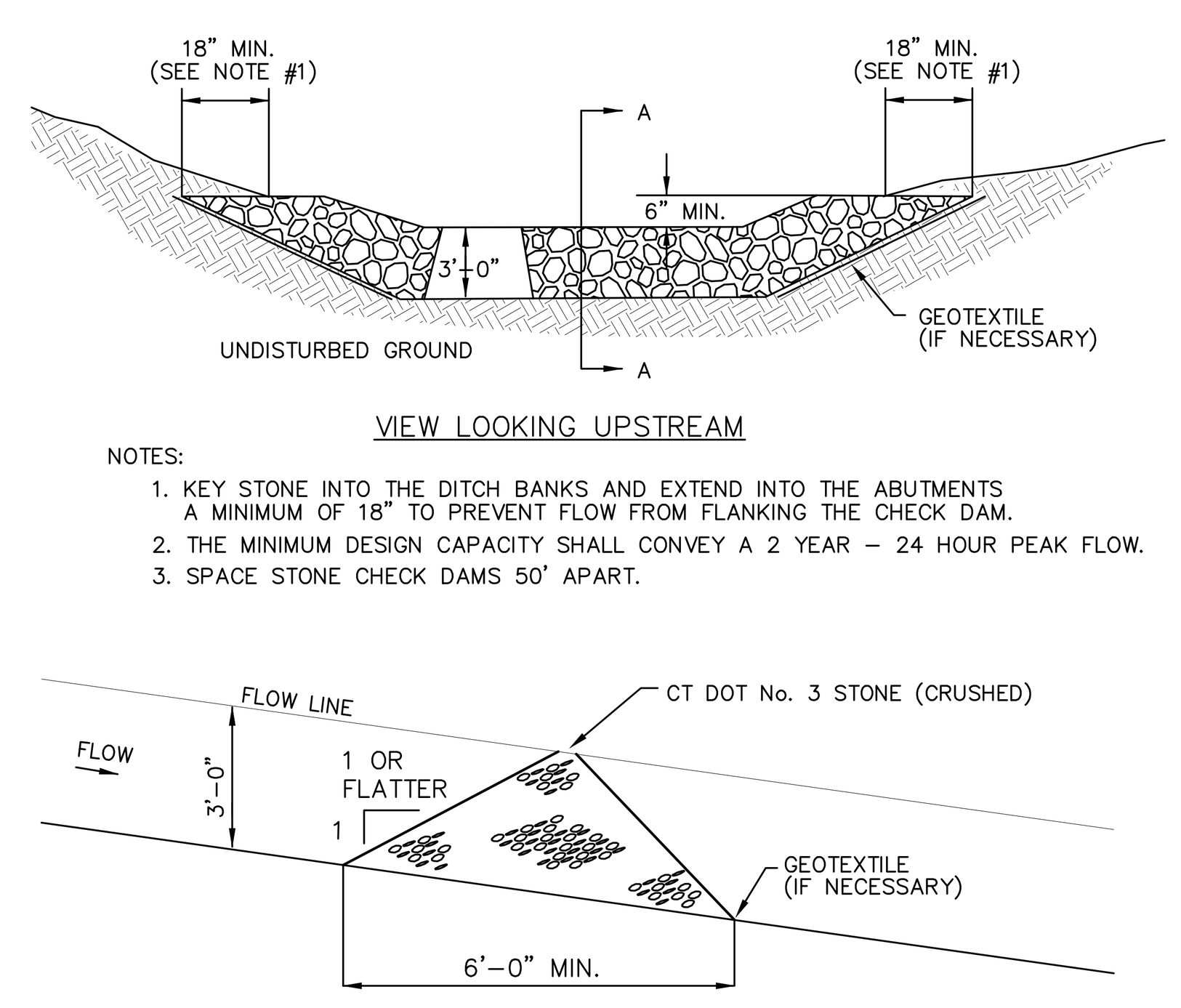
DWG. NO.
C5.1

MPN Project Number: 2017226.00



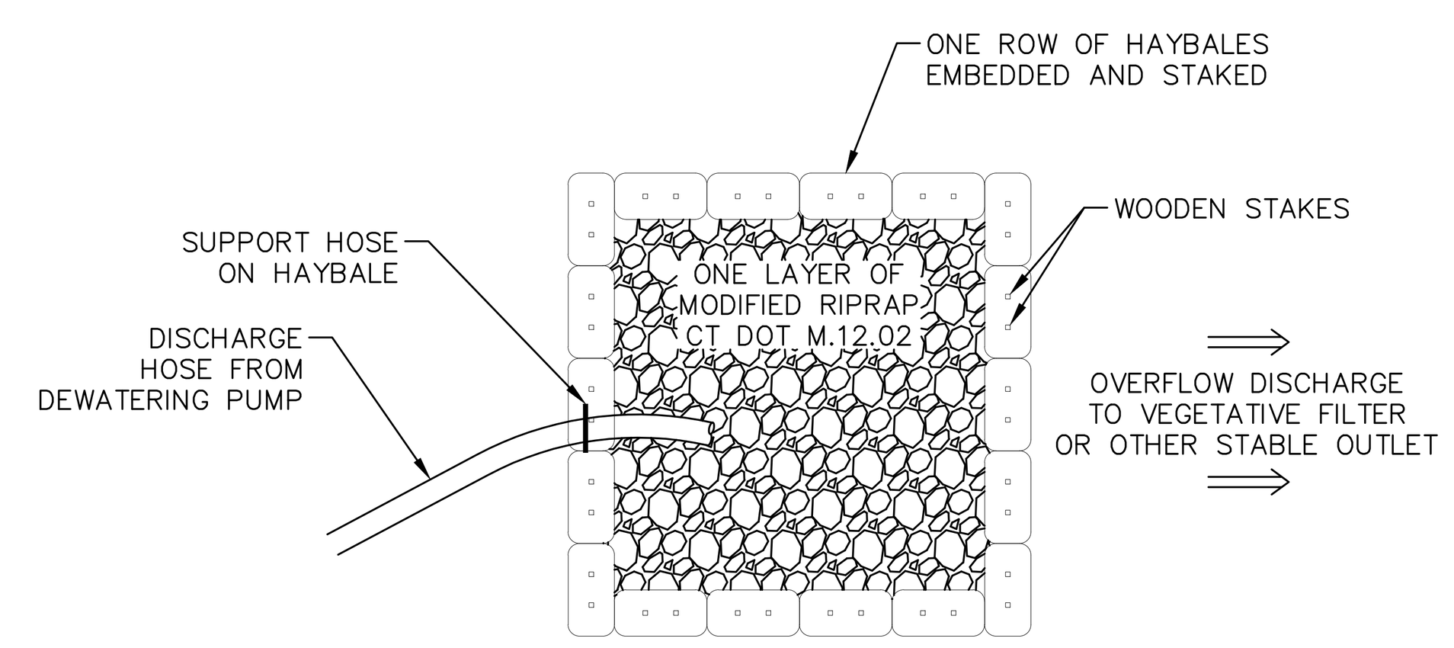
NOTES:
1. PLACE 15 INCH DIAMETER PERFORATED HDPE PIPE AND CRUSHED STONE BELOW TRENCH BOTTOM AHEAD OF WORK AREA. SET INTAKE OF PUMP INSIDE PIPE AND DEWATER TRENCH.
2. DISCHARGE MUDDY WATER TO OUTLET PROTECTION OF A DIRT BAG, TANK TRUCK, PUMP OUTLET BARREL, SETTLING BASIN OR OTHER APPROVED OUTLET. DO NOT DISCHARGE MUDDY WATER TO THE ROAD GUTTER, STORM DRAINAGE SYSTEM, WETLANDS OR STREAMS.
3. MAINTAIN INLET PER SECTION 5-13 DEWATERING OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

1 TRENCH DEWATERING - PUMP INTAKE PROTECTION
SCALE: NTS

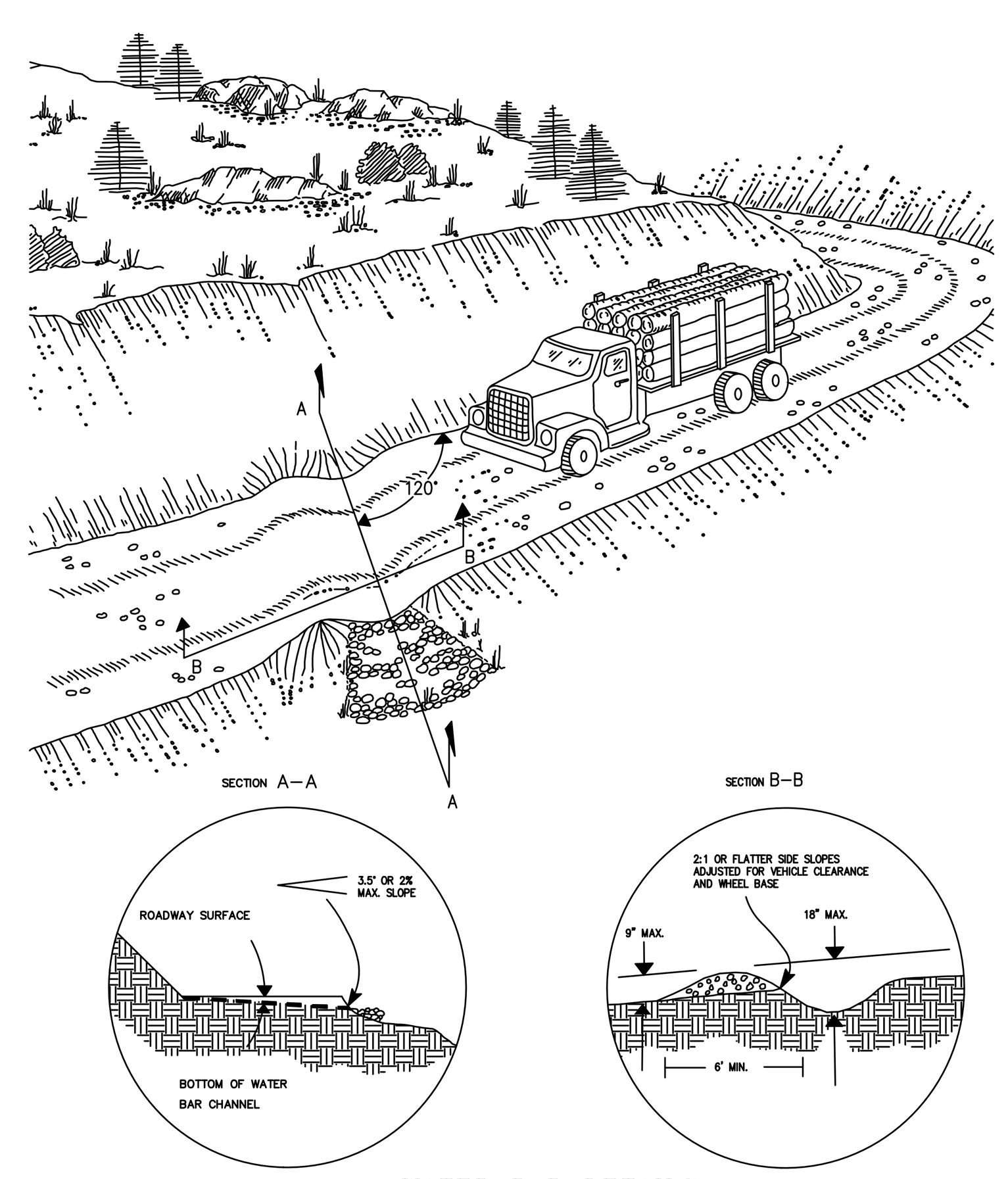


NOTES:
1. KEY STONE INTO THE DITCH BANKS AND EXTEND INTO THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW FROM FLANKING THE CHECK DAM.
2. THE MINIMUM DESIGN CAPACITY SHALL CONVEY A 2 YEAR – 24 HOUR PEAK FLOW.
3. SPACE STONE CHECK DAMS 50' APART.

2 STONE CHECK DAM DETAIL
SCALE: NTS



3 TRENCH DEWATERING - SETTLING BASIN
SCALE: NTS



4 WATER BAR DETAIL
SCALE: NTS

Figure PS-3 Seed Mixtures for Permanent Seeding

No.	Seed Mixture (Variety)[4]	Lbs/Acre	Lbs/1,000 Sq. Ft.
1[5]	Kentucky Bluegrass Creeping Red Fescue (Pennlawn, Wintergreen) Perennial Ryegrass (Norlea, Manhatten)	20 20 5 Total 45	.45 .45 .10 1.00
2[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Redtop (streeking, Common) Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln)	20 2 20 Total 42	.45 .05 .45 .95
3[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Bird's-foot Trefoil (Empire, Viking) with inoculant[1] Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln)	20 8 20 Total 48	.45 .20 .45 1.10
4[5]	Creeping Red Fescue (Pennlawn, Wintergreen) or Tall Fescue (Kentucky 31) Redtop (Streeker, Common) Bird's-foot Trefoil (Empire, Viking) with inoculant[1]	20 2 8 Total 30	.45 .05 .20 .70
5[5]	White Clover Perennial Rye Grass	10 2 Total 12	.25 .05 .30
6[5]	Creeping Red Fescue Redtop (streeker, Common) Perennial Rye Grass	10 2 20 Total 42	.50 .05 .50 1.05
7[5]	Smooth Bromegrass (Saratoga, Lincoln) Perennoal Ryegass (Norlea, Manhatten) Bird's-foot Trefoil (Empire, Viking) with inoculant[1]	15 5 10 Total 30	.35 .10 .25 .70
8[6]	Switchgrass (Blackwell, Shelter, Cave-in-rock) Weeping Lovegrass Little Bluestem (Blaze, Aldous, Camper)	10[1] 3 10[1] Total 23	.25 .07 .25 .57
9[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Crown Vetch (Chemung, Penngift) with inoculant[1] (or Flatpea (Lathco) with inoculant[1]) Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln) Redtop (streeker, Common)	10 15 (30) 15 2 Total 42 (or 57)	.25 .35 (.75) .35 .05 1.00 (or 1.40)
10[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Redtop (streeker, Common) Crown Vetch (Chemung, Penngift) with inoculant (or Flatpea (Lathco) with inoculant)	20 2 15 (30) Total 37 (or 52)	.45 .5 .35 (.75) .85 (or 1.25)
11[5]	Bird's-foot Trefoil (Empire, Viking) with inoculant[1] Crown Vetch (Chemung, Penngift) with inoculant[1] Creeping Red Fescue (Pennlawn, Wintergreen) or Tall Fescue (Kentucky 31)	8 15	.20 .35
12[6]	Switchgrass (Blackwell, Shelter, Cave-in-rock) Perennial Ryegrass (Norlea, Manhatten) Crown Vetch (Chemung, Penngift) with inoculant [1]	101 5 15 Total 45	.25 .10 .35 1.05
13–15	Not used		
16[5]	Tall Fescue (Kentucky 31) Flatpea (Lathco) with inoculant [1]	20 30 Total 50	.45 .75 1.20
17 & 18	Not used		
19[5]	Chewing Fescue Hard Fescue Colonial Bentgrass Bird's-foot Trefoil (Empire, Viking) Perennial Rygrass	35 30 5 10 20 Total 100	.80 .70 .10 .20 .50 2.3
21[5]	Creeping Red Fescue (Pennlawn, Wintergreen)	Total 60	1.35
22[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Tall Fescue (Kentucky 31)	40 20 Total 60	.90 .45 1.35
23[5]	Creeping Red Fescue (Pennlawn, Wintergreen) Flatpea (Lathco) with inoculant[1]	15 30 Total 45	.35 .75 3.60
24–28	Not Used		
29	Turf Type Tall Fescue (Bonanza, Mustang, Rebel II, Spartan, Jaguar) or Perennial Rye ("Future 2000" mix, Fiesta II, Blazer II, and Dasher II)	175 to 250	6 to 8

[1] Use proper inoculant for legume seeds, use four times recommended rate when hydroseeding.

[2] Use Pure Live Seed (PLS) = $\frac{\% \text{ Germination} \times \% \text{ Purity}}{100}$

EXAMPLE: Common Bermuda seed with 70% germination and 80% purity=

$$\frac{70 \times 80}{100} \quad \text{or} \quad \frac{56}{100} \quad \text{or} \quad 56\%$$

$$\frac{10 \text{ lbs PLS/acre}}{56\%} = 17.9 \text{ lbs/acre of bagged seed}$$

[3] DOT All purpose mix

[4] Wild flower mix containing New England Aster, Baby's Breath, Black Eye Susan, Catchfly, Dwarf Columbine, Purple Conflower, Lance-leaved Coreopsis, Cornflower, Ox-eye Daisy, Dame's Rocket, Scarlet Flax, Foxglove, Gayfeather, Rocky Larkspur, Spanish Larkspur, Corn Poppy, Spurred Snapdragon, Wallflower and/or Yarrow may be added to any seed mix given. Most seed suppliers carry a wild flower mixture that is suitable for the Northeast and contains a variety of both annual and perennial flowers. Seeding rates for the specific mixtures should be followed.

[5] Considered to be a cool season mix.

[6] Considered to be a warm season mix.

1.0 POST CONSTRUCTION INSPECTION & MAINTENANCE

Post-construction, regularly scheduled inspections and maintenance will be necessary to ensure the permanent structural features such as the stormwater management basins, water quality units and the stormwater conveyance system components remain optimally functional and continue to reduce the risk of sediment loading of inland wetlands and surface water bodies.

When construction is complete, the Contractor will remain responsible for the site until the entire site has reached final stabilization. The site is considered stabilized when all soil disturbing activities have been completed and a full uniform, perennial vegetative cover has been established or equivalent stabilization measures such as the use of mulches or geotextiles have been employed on all unpaved areas and areas not covered by permanent structures. Weekly inspections should continue until the site has reached this point. Additionally, visual inspections should be performed after every rain event of 0.5 inches or more in 24-hours for the lifetime of the permanent stormwater control measures.

At the time of final stabilization, the Owner's Engineer shall perform a final inspection of the site and certify that the site has successfully undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls such as silt fence, not needed for long term use, have been removed. At this point, the Owner is responsible for the following:

1. Submit to the CTDEEP a Notice of Termination prepared by the Owners' Engineer.
2. Identify all the permanent stormwater management structures that have been constructed and provide the Land Owner with an Operations and Maintenance (O&M) manual that will be necessary in order for the structures to function properly after the site has been stabilized. Section 1.0 of this report satisfies the O&M requirements.
3. Transfer the Engineering Summary Report and Stormwater Pollution Prevention Control Plan (SWPPP) to the Land Owner.
4. Certify that the permanent structures have been constructed as described by this plan and the drawings.

The Land Owner shall overtake responsibility of inspecting and maintaining drainage and erosion control features over the lifetime of the structures. Maintenance personnel, employed by the Land Owner, must be aware of the SWPPP and should be trained to recognize signs that stabilization measures may not be performing optimally or are failing. The inspection of on-site stabilization measures will become part of routine preventative maintenance practiced by the Land Owner. Inspections should be performed after rain events of 0.5 inches or greater in a 24-hour period for the lifetime of the permanent stormwater control measures and at a minimum of twice per year (April 1st and Nov 1st). Inspections and maintenance should be performed as described below within this section.

1.1 Inspection

Overall Site Inspection

The overall site, embankments, vegetation and stormwater conveyance system components including water quality units, outlet pipes, 4' deep catch basin sumps, culverts and swales should be inspected after every major rain event of 0.5 inch or greater in a 24-hour period for the lifetime of the permanent stormwater control measures and twice per year (April 1st and Nov 1st). A rain gauge should be installed and permanently maintained at the site. The inspections should include but are not limited to:

1. Density and condition of vegetation and ground cover.
2. Erosion, differential settlement or cracking of embankment.
3. Bulging or sliding of toe of embankments.
4. Sedimentation of on-site or downstream water bodies.
5. Sedimentation of culverts or swales.
6. Sedimentation of lawn areas, paved areas, water quality unit outlets or catch basin sumps. Parking Area Surface Cleaning – All paved parking areas shall be swept annually between April 1st and July 1st.
7. Accumulation of pollutants, including oils or grease in water quality units and outlet structure sumps.
8. Damage or fatigue of storm sewer structures or associated components.
9. Accumulation of sediment and debris at paved catch basin grates. All basin rim areas and sumps shall be kept clear of sediment, trash, and debris. All catch basins shall be inspected annually between May 1st and September 15th and sumps shall be cleaned when the depth of accumulated material exceeds 1 foot.
10. Rip-Rap outlet protection areas should be inspected at least semi-annually and after substantial rainfall events. These areas shall be cleared of all sediment deposits and invasive plant species. Damage and deterioration of the areas shall be repaired immediately.

Stormwater Basin/ Water Quality Practice Inspection

Stormwater management basins and other water quality practices and all associated features such as spillways, inlets, outlets, forebays and rip rap filter berms should be inspected after every major rain event of 0.5 inch or greater in a 24-hour period for the lifetime of the permanent stormwater control measures and twice per year (April 1st and Nov 1st). Inspections should include but are not limited to:

1. Density and condition of vegetation and ground cover.
2. All features of the basin should be clear of brush and tree growth.
3. Erosion, differential settlement or cracking of basin embankments.
4. Bulging or sliding of toe of embankments.
5. Presence of animal burrows.
6. Evidence of clogging or sedimentation at inlets or outlets, including paved leak-offs.
7. Erosion or sedimentation of the extended flow path through the detention basin.
8. Spillways should be inspected for structural integrity.
9. Spillways should be clear of obstructions.
10. Inlet/outlet riprap should be inspected for scour and dislodged stones and obstructions should be removed. These areas should be inspected at least semi-annually and after substantial rainfall events. These areas shall be cleared of all sediment deposits and invasive plant species. Damage and deterioration of the areas shall be repaired immediately.
11. Accumulation of sediments at inlets, outlets, silt traps, and catch basin grates. All basin rim areas and sumps shall be kept clear of sediment, trash, and debris. All catch basins shall be inspected annually between May 1st and September 15th and sumps shall be cleaned when the depth of accumulated material exceeds 1 foot.

1.2 Maintenance

Overall Site Maintenance

Maintaining vegetative and structural measures for soil protection is necessary to keep the storm water system functioning properly. Maintenance should occur after every major rain event of 0.5 inch or greater in a 24-hour period for the lifetime of the permanent stormwater control measures and twice per year (April 1st and Nov 1st), and should include but is not limited to:

Seasonal Maintenance

1. Vegetated areas should be maintained to promote vigorous and dense growth. Lawn areas should be mowed at least three times a year but may require more frequent mowings depending on the growth rate.

2. Accumulation of litter and debris should be removed during each mowing or sweep operation. Parking Area Surface Cleaning – All paved parking areas shall be swept annually between April 1st and July 1st.

3. Structural components of the storm sewer system such as culverts, water quality units, underground detention system and outlet structures (including sumps) which require repair or replacement should be addressed immediately following identification. All basin rim areas and sumps shall be kept clear of sediment, trash, and debris. All catch basins shall be inspected annually between May 1st and September 15th and sumps shall be cleaned when the depth of accumulated material exceeds 1 foot. Outlet control structures shall be inspected annually between May 1st and September 15th. Debris and sediment within the structures shall be removed annually.

4. Swale and drainageway maintenance will include periodic mowing, occasional spot reseeding and weed control. Weeds and woody plants should be eradicated or cut back since they reduce the efficiency of the drainageway.

5. Rip rap outlet protection that show signs of scour should be repaired. Weed and brush growth at the inlets and outlets should controlled as needed. These areas should be inspected at least semi-annually and after substantial rainfall events. These areas shall be cleared of all sediment deposits and invasive plant species. Damage and deterioration of the areas shall be repaired immediately.

Winter Maintenance

1. Remove snow and ice from catch basin grates, basin inlet and outlet structures and away from culvert end sections.

2. Snow removed from paved areas should not be piled at inlets/outlets of the storm water management basin or on the catch basin grates.

3. Use of deicing materials should be limited to sand and environmentally friendly chemical products. Use of salt mixtures should be kept to a minimum.

4. Sand used for deicing should be clean, course material free of fines, silt, and clay.

5. Materials used for deicing should be removed during the early spring by sweeping and/or vacuuming. Parking Area Surface Cleaning – All paved parking areas shall be swept annually between April 1st and July 1st.

Stormwater Management/Water Quality Maintenance

1. Side slope, embankments, inlets and overflow spillways should be mowed at least three times a year but may require more frequent mowings depending on the growth rate.

2. Trees and shrubs should be removed at the inlets and outlets.

3. Accumulation of litter and debris should be removed during each mowing or sweep operation. Parking Area Surface Cleaning – All paved parking areas shall be swept annually between April 1st and July 1st.

4. Structural components of the basin which require repair or replacement should be addressed immediately following identification.

5. Optimum operation of the stormwater management basins is dependent on storage capacity, inflow and sediment load. Basins and forebays should be monitored periodically for sediment accumulation. Sediments should be removed when capacity has been reduced by 10%, inlets/outlets become clogged or restricted, or when 6 inches has accumulated. When sediment removal is required, original grades should be restored as shown on the Construction Plans. Outlet control structures shall be inspected annually between May 1st and September 15th. Debris and sediment within the structures shall be removed annually.

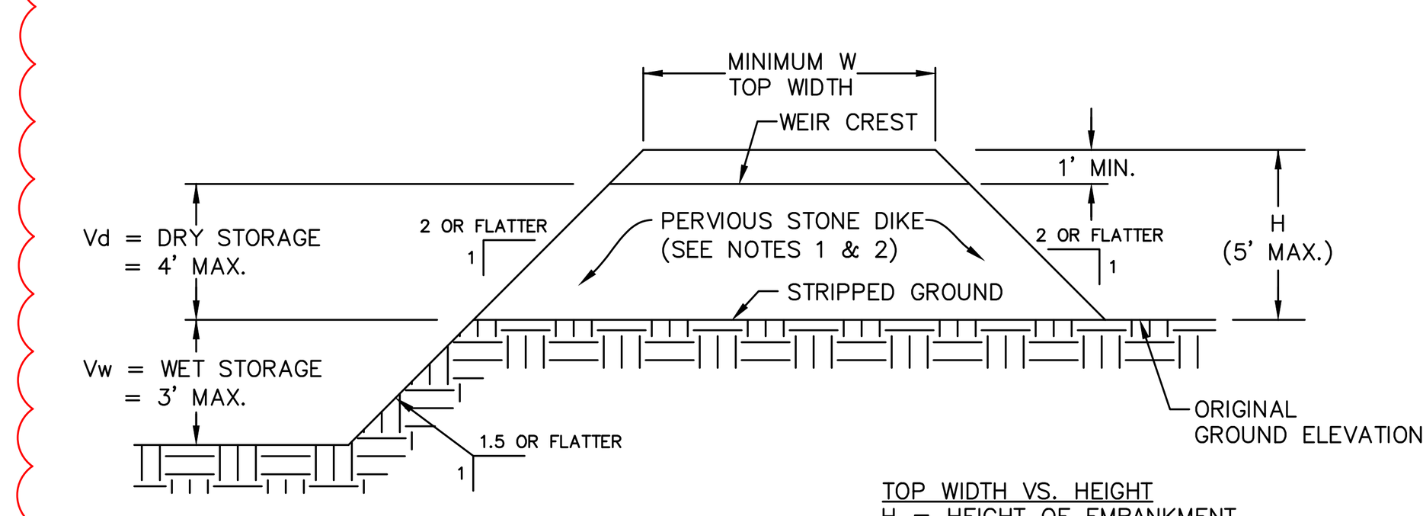
6. Optimum operation of the underground infiltration units is dependent on storage capacity, inflow and sediment load. The outlet structure should be monitored periodically for sediment and or debris accumulation. Sediments and debris should be removed from the outlet structure immediately upon inspection as the structure controls the rate of release from the system.

7. The water quality units should be maintained by manufacturer's specifications after construction is complete, when the site has reached a full uniform, perennial vegetative cover. The water quality units should also be maintained twice a year (April 1st and Nov 1st) per manufacturer's specifications; which typically involves measurements of sludge depth with a "sludge judge" followed by removal with a "vac-truck". These maintenance measures are to be performed at the Land Owners expense.

8. Spillways should be cleared of obstructions.

9. Inlet / outlet riprap damage due to scour and sedimentation should be repaired. These areas should be inspected at least semi-annually and after substantial rainfall events. These areas shall be cleared of all sediment deposits and invasive plant species. Damage and deterioration of the areas shall be repaired immediately.

1

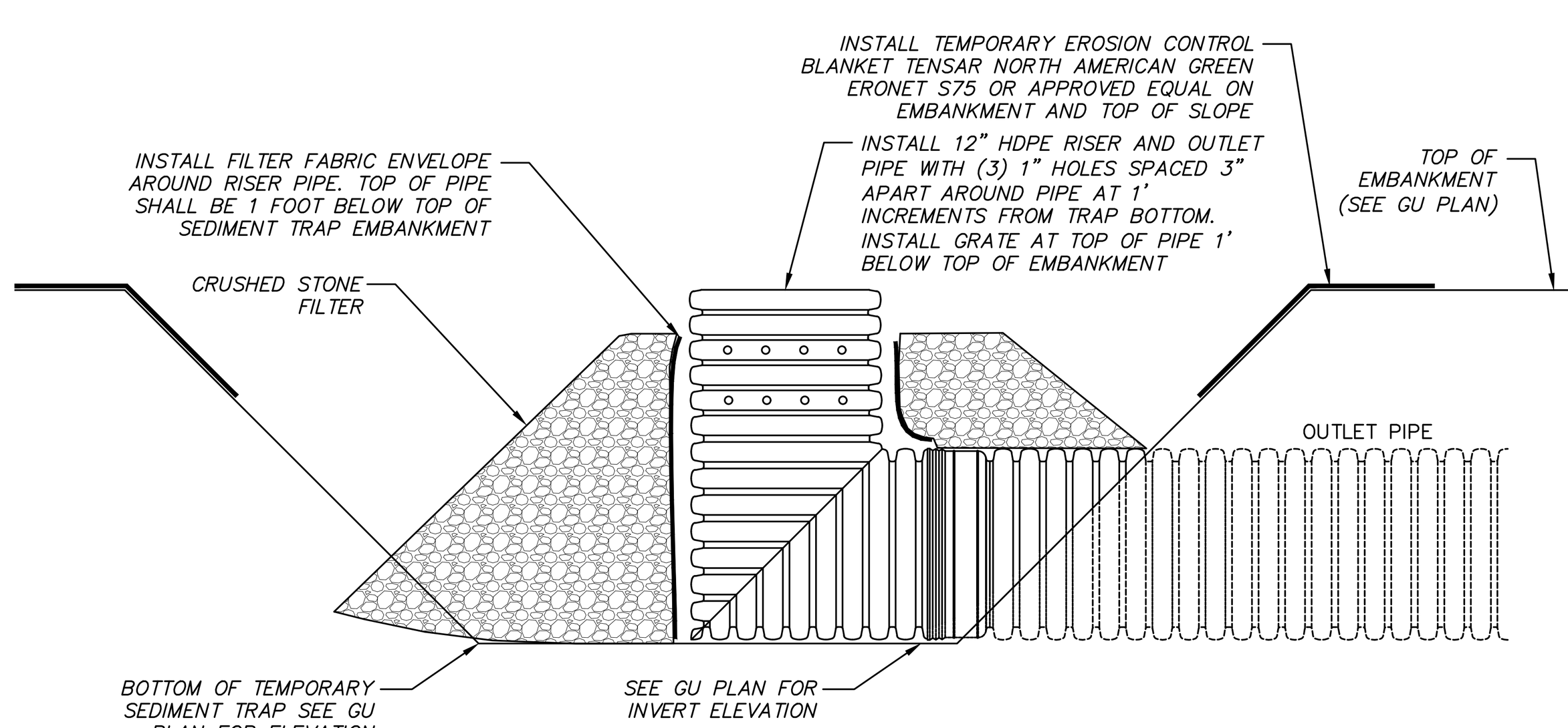


NOTES
1. PERVIOUS STONE DIKE SHALL BE CONSTRUCTED OF CT DOT MODIFIED RIPRAP WITH #3 STONE ON FACE.
2. NON-OVERFLOW PORTIONS AND ABUTMENTS OF TEMPORARY SEDIMENT TRAPS MAY BE CONSTRUCTED OR COMPACTED EARTHFILL.
3. SEDIMENT TRAP SHALL HAVE A STORAGE VOLUME OF 134 CUBIC YARDS PER CONTRIBUTING DRAINAGE AREA, HALF OF WHICH SHALL BE IN THE FORM OF WET STORAGE VOLUME.

TOP WIDTH VS. HEIGHT
H = HEIGHT OF EMBANKMENT
W = TOP WIDTH OF EMBANKMENT

H (ft.)	W (ft.)
1.5	2.0
2.0	2.0
2.5	2.5
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

5 TEMPORARY SEDIMENT TRAP DETAIL
SCALE: NTS



6 TEMPORARY SEDIMENT TRAP DETAIL
SCALE: NTS

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1 2/19/19 ADDENDUM 1

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132-0089 N
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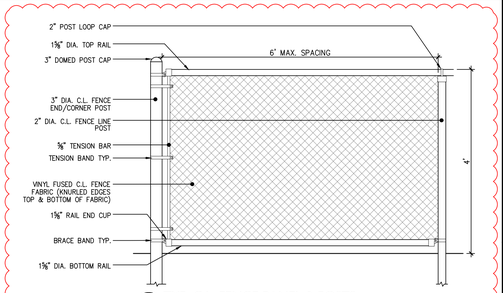
SEDIMENTATION/ EROSION CONTROL DETAILS

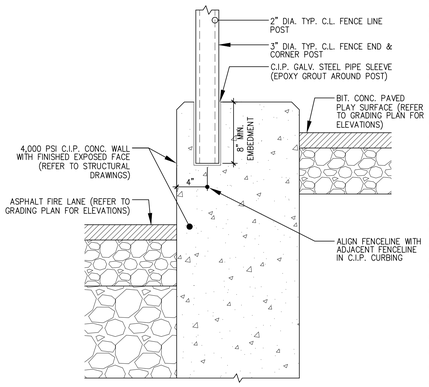
DATE 11/2/2018

DWG. NO.
C5.5

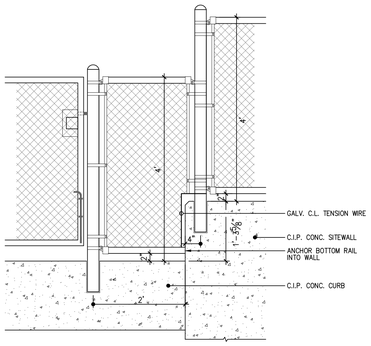
MPN Project Number: 2017226.00



1 TYP. C.L. FENCE PANEL & POSTS
SCALE: 3/4"=1'-0"



2 C.L. FENCE/GUARD ON C.I.P. RET. WALL
SCALE: 1-1/2"=1'-0"



3 C.L. FENCE TRANSITION (CURB SET TO WALL SET)
SCALE: 3/4"=1'-0"

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

160 West Street
Suite 4E
Cromwell, CT
T (860) 635-1520
F (860) 635-4226

LRC Engineering & Surveying, DPC
LRC Environmental Services, LLC
Land Resource Consultants, Inc.

Land Planning | Civil/Coastal Services | Land Survey
Landscape Architecture | Environmental Services

www.lrcconnect.com

MOSER
PILON
NELSON
ARCHITECTS

30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
SITE DETAILS

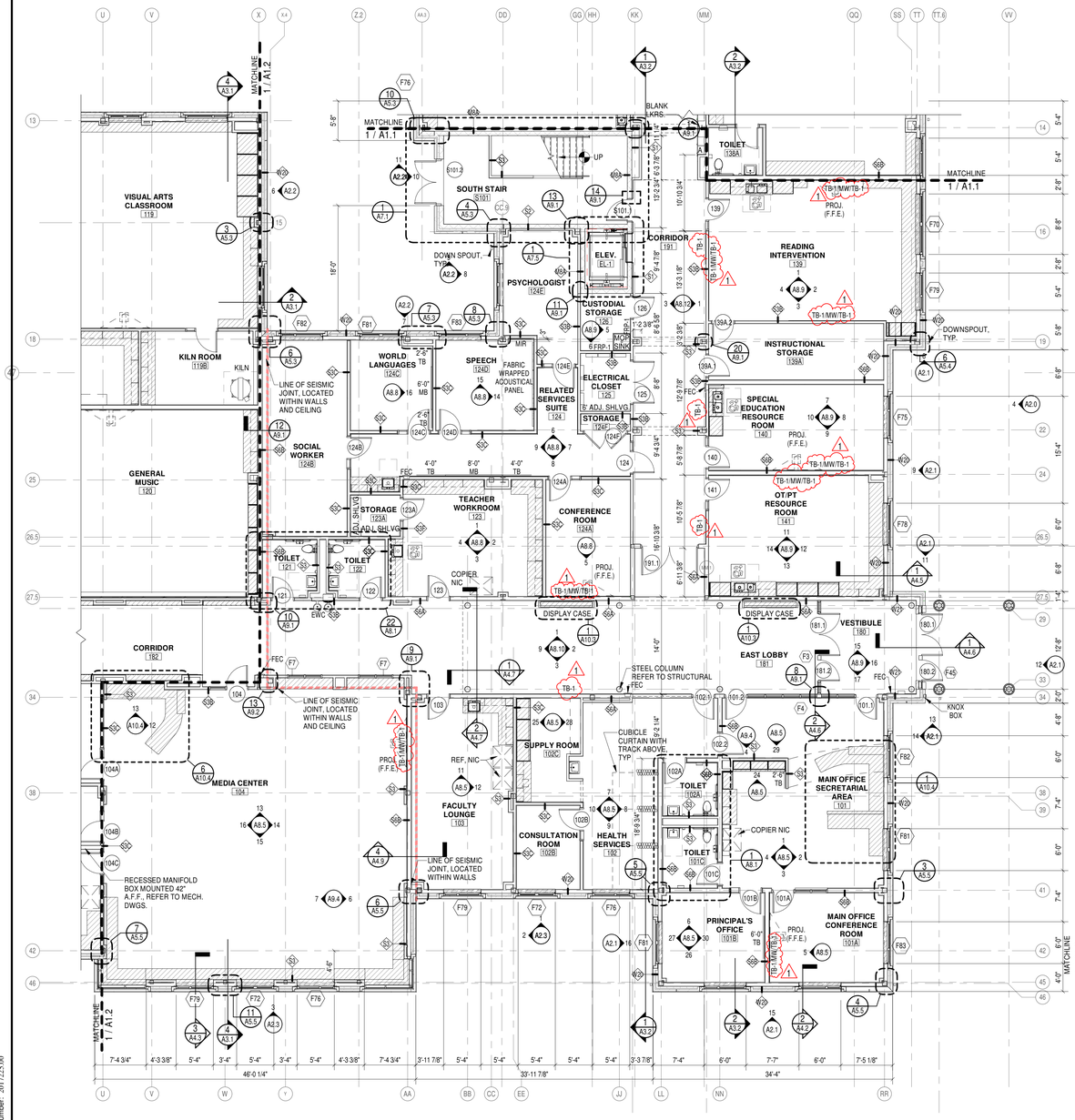
DATE 11/2/2018

DWG. NO.

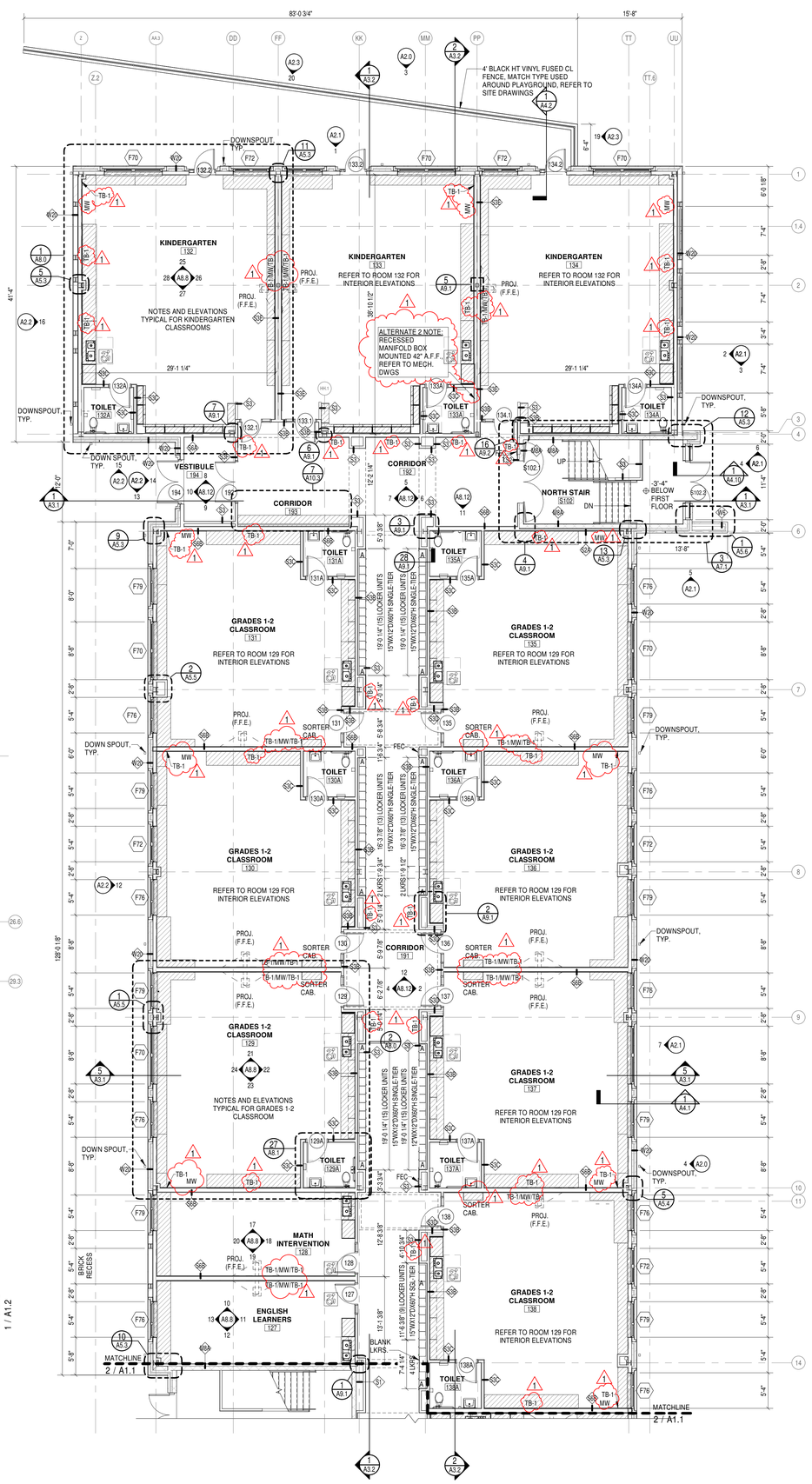
C5.8

Feb 15, 2019 3:31pm ewall Z:\Landresourceconsultants\2017 Jobs\17-2145 MPN SW Philip R Smith\Dwg\UNIT-2145.dwg
Layout: Sheet C5.8

MPN Project Number: 2017226.00

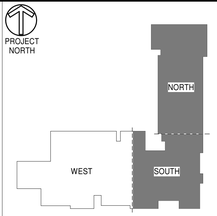


2 / A1.1 PARTIAL FIRST FLOOR CONSTRUCTION PLAN - SOUTH
1/8" = 1'-0"



1 / A1.1 PARTIAL FIRST FLOOR CONSTRUCTION PLAN - NORTH
1/8" = 1'-0"

PROJECT NORTH



KEYPLAN

HATCH INDICATES MILLWORK

LEGEND

GENERAL NOTES:

1. DIMENSIONS SHOWN ON ARCHITECTURAL FLOOR PLANS AND ENLARGED PLAN DETAILS ARE, TO FACE OF STUD, TO FACE OF MASONRY, OR TO CENTERLINE OF COLUMN UNLESS OTHERWISE.
2. REFER TO SHEET C01.1 CODE PLANS FOR FIRE RATED PARTITION. LOCATIONS AND RATINGS.
3. REFER TO SHEET A0.3 FOR INTERIOR PARTITION TYPES.
4. REFER TO INTERIOR ELEVATIONS FOR TACK BOARD AND MARKERBOARD DIMENSIONS.

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.

132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE

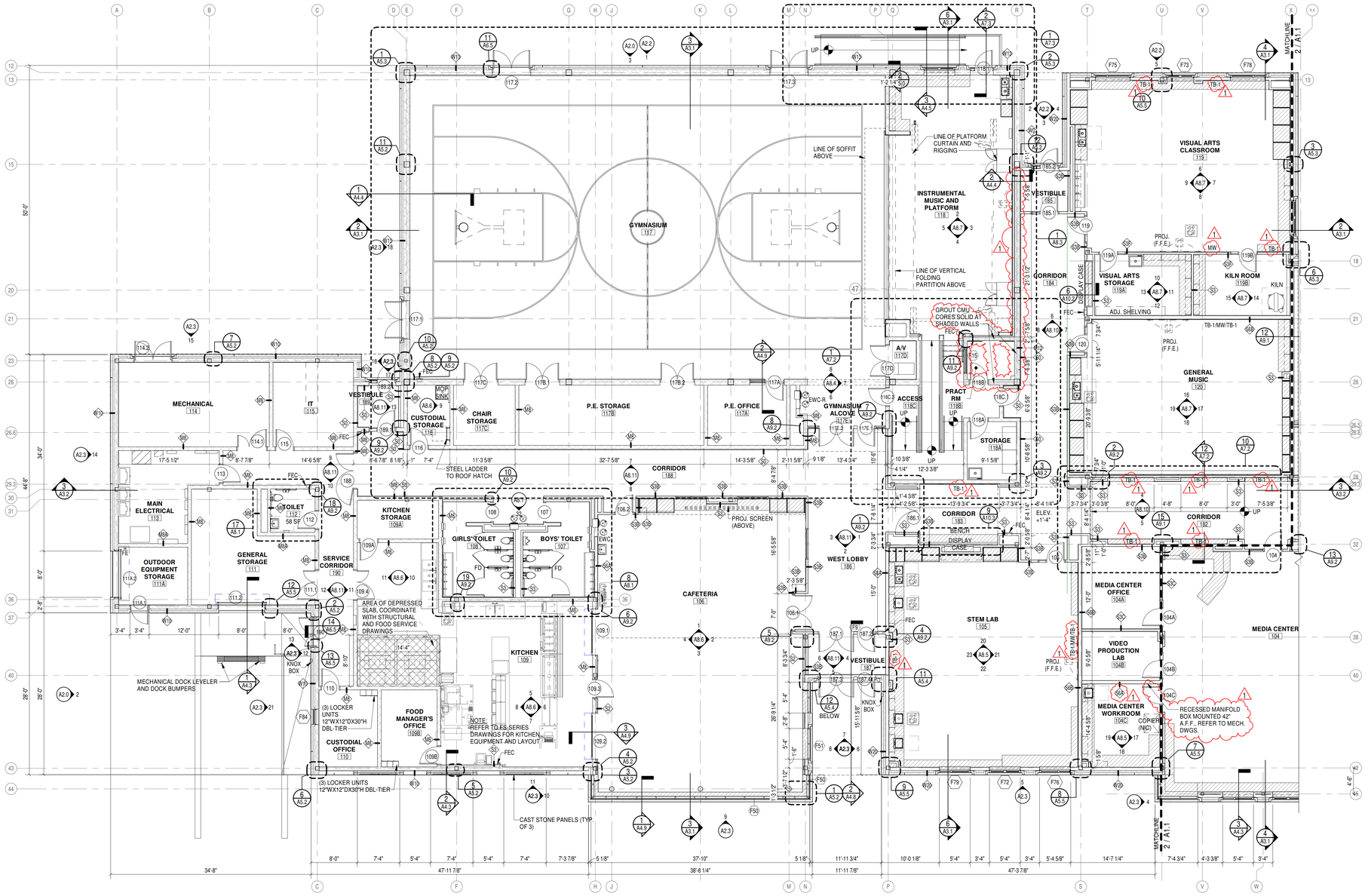
PARTIAL FIRST FLOOR CONSTRUCTION PLAN - NORTH AND SOUTH

DATE 11/2/2018

DWG. NO.

A1.1

MPN Project Number: 2017225.00



PARTIAL FIRST FLOOR CONSTRUCTION PLAN - WEST

1/8" = 1'-0"

PROJECT NORTH

NORTH
WEST
SOUTH

KEYPLAN

HATCH INDICATES MILLWORK

LEGEND

GENERAL NOTES:

1. DIMENSIONS SHOWN ON ARCHITECTURAL FLOOR PLANS AND ENLARGED PLAN DETAILS ARE, TO FACE OF STUD, TO FACE OF MASONRY, OR TO CENTERLINE OF COLUMN UNLESS OTHERWISE.
2. REFER TO SHEET CD1.1 CODE PLANS FOR FIRE RATED PARTITION. LOCATIONS AND RATINGS.
3. REFER TO SHEET A0.3 FOR INTERIOR PARTITION TYPES.
4. REFER TO INTERIOR ELEVATIONS FOR TACK BOARD AND MARKERBOARD DIMENSIONS.

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.

132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

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SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE

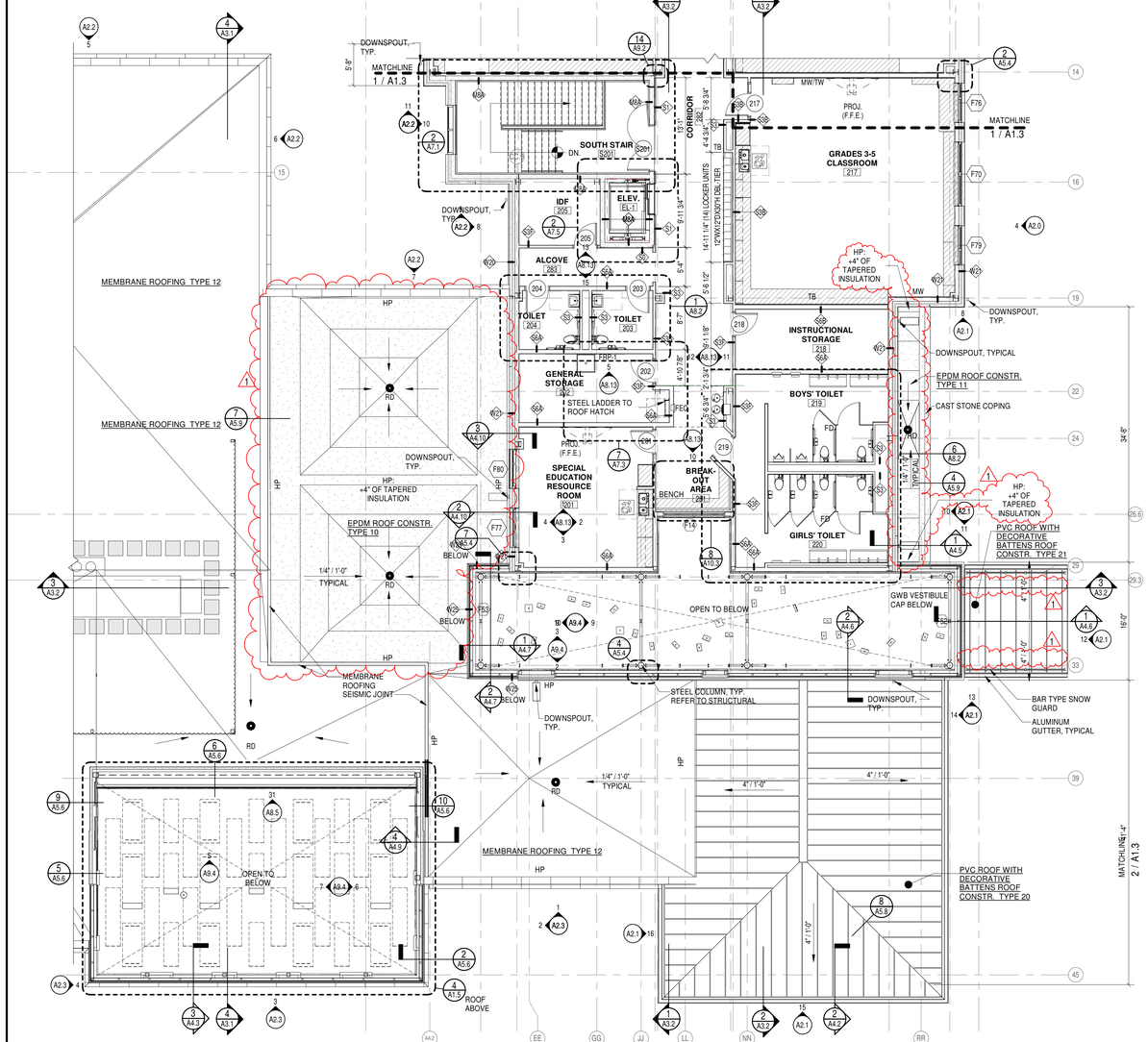
PARTIAL FIRST FLOOR CONSTRUCTION PLAN - WEST

DATE 11/2/2018

DWG. NO.

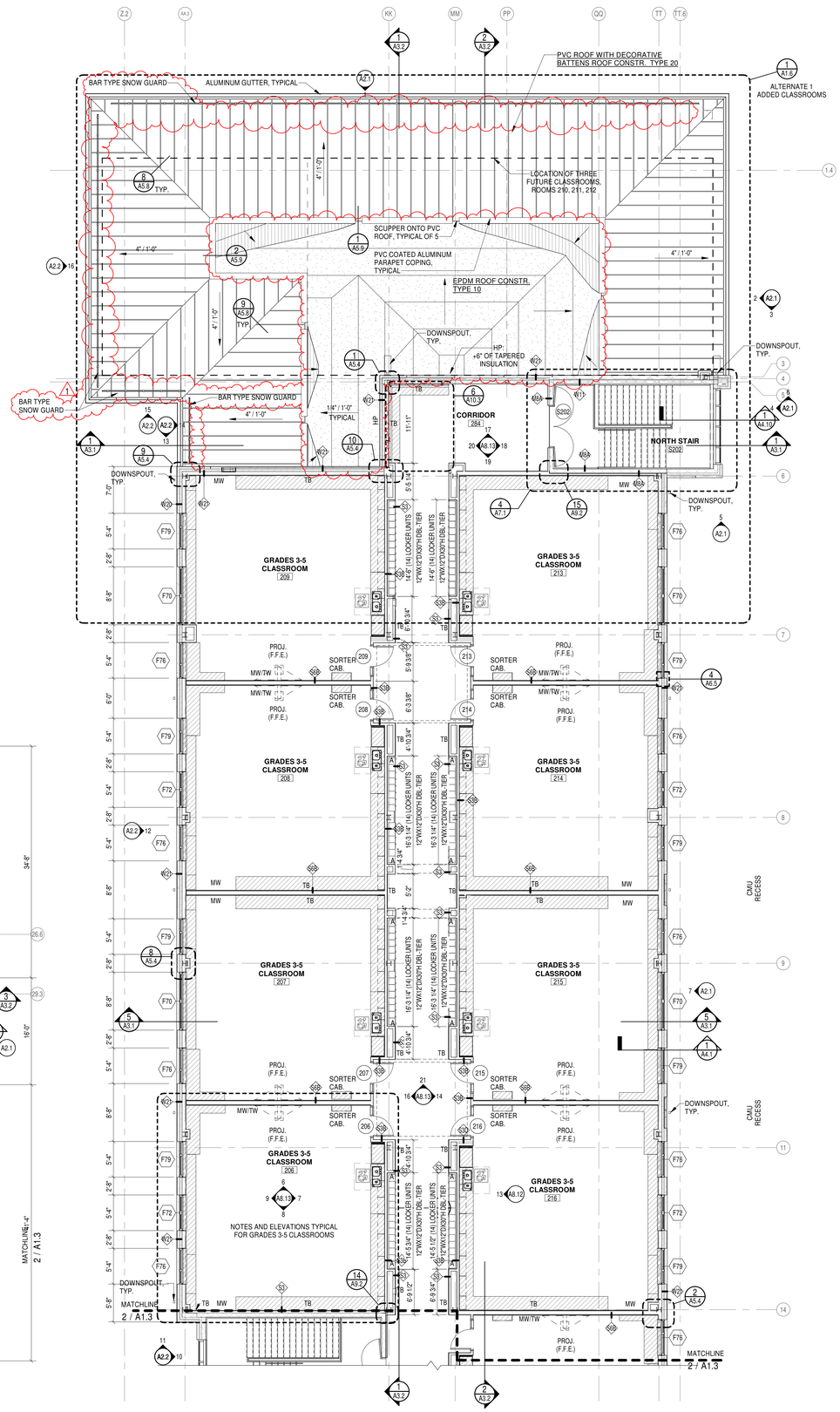
A1.2

MPN Project Number: 2017225.00



PARTIAL SECOND FLOOR CONSTRUCTION PLAN - SOUTH

1/8" = 1'-0"

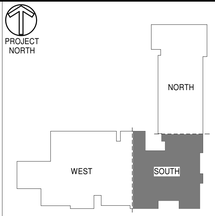


PARTIAL SECOND FLOOR CONSTRUCTION PLAN - NORTH

1/8" = 1'-0"

MPN Project Number: 2017225.00

PROJECT NORTH



REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

KEYPLAN

HATCH INDICATES MILLWORK

LEGEND

ROOF PLAN LEGEND

EPDM ROOF CONSTR. TYPE 10
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), WITH TAPERED INSULATION AND CRICKETS AS REQUIRED TO PITCH TO DRAIN
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 11
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), TAPERED INSULATION AND CRICKETS TO PITCH TO DRAIN
- COMPOSITE ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 12
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), PITCHED TO DRAIN
- SLOPED STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

25° TYP.

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 20
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- (2) LAYERS OF RIGID INSUL. WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.)
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

25° TYP.

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 21
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- STRUCTURAL METAL ROOF DECK

WALKWAY PAD

RD - ROOF DRAIN

CRICKET AS REQUIRED

GENERAL NOTES:
1. DIMENSIONS SHOWN ON ARCHITECTURAL FLOOR PLANS AND ENLARGED PLAN DETAILS ARE, TO FACE OF STUD, TO FACE OF MASONRY, OR TO CENTERLINE OF COLUMN UNLESS OTHERWISE.
2. REFER TO SHEET CD1.1 CODE PLANS FOR FIRE RATED PARTITION. LOCATIONS AND RATINGS.
3. REFER TO SHEET A0.3 FOR INTERIOR PARTITION TYPES.
4. REFER TO INTERIOR ELEVATIONS FOR TACK BOARD AND MARKERBOARD DIMENSIONS.

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
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SOUTH WINDSOR, CT 06074

PHILIP R. SMITH ELEMENTARY SCHOOL

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

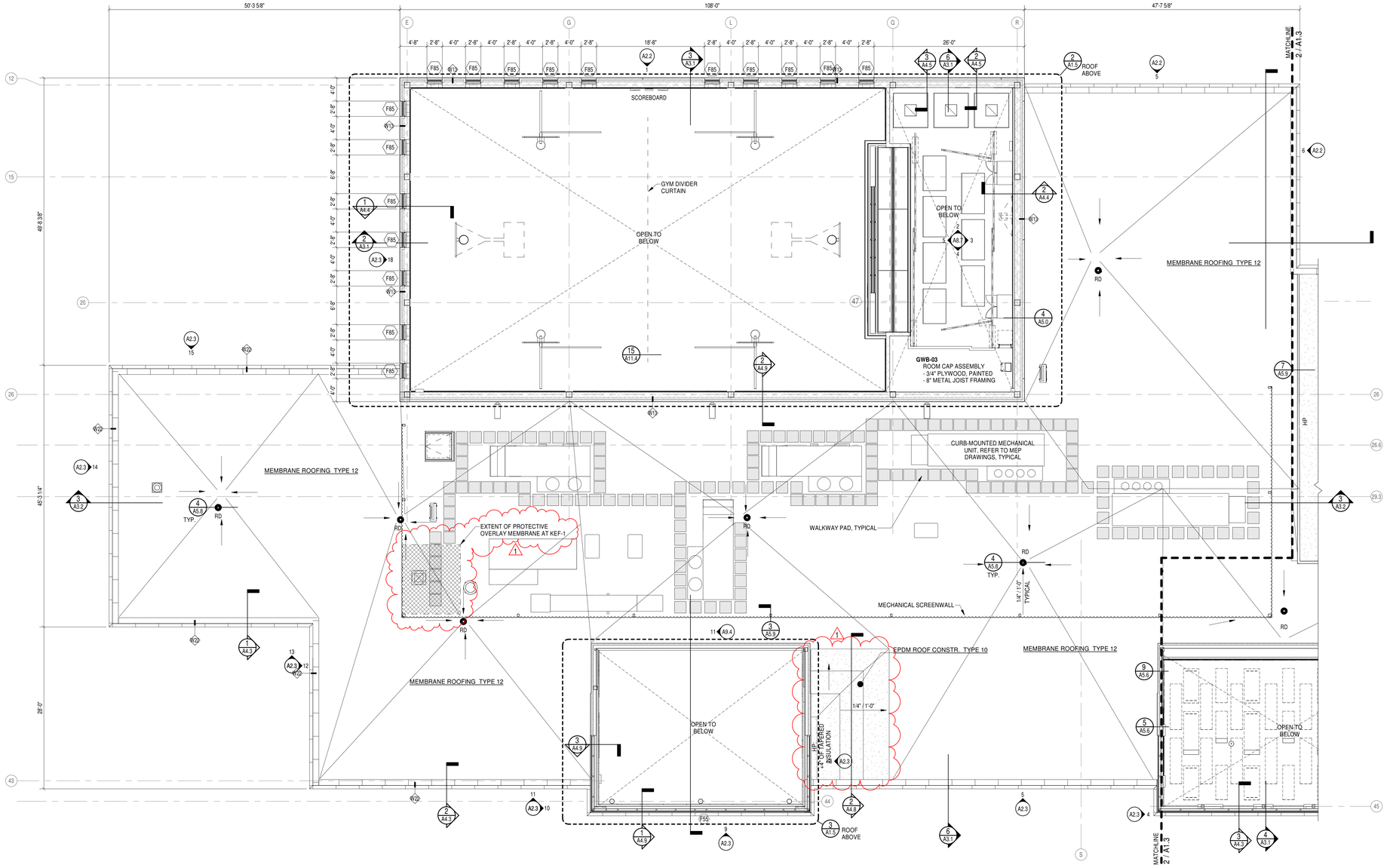
TITLE

PARTIAL SECOND FLOOR AND LOWER ROOF CONSTRUCTION PLAN - NORTH AND SOUTH

DATE 11/2/2018

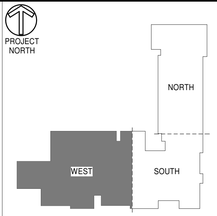
DWG. NO.

A1.3



1 PARTIAL SECOND FLOOR CONSTRUCTION PLAN - WEST
1/8" = 1'-0"

PROJECT NORTH



KEYPLAN

ROOF PLAN LEGEND

- EPDM ROOF CONSTR. TYPE 10
  - SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
  - 5/8" COVERBOARD
  - (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), WITH TAPERED INSULATION AND CRICKETS AS REQUIRED TO PITCH TO DRAIN
  - STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS
- EPDM ROOF CONSTR. TYPE 11
  - SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
  - 5/8" COVERBOARD
  - (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), TAPERED INSULATION AND CRICKETS TO PITCH TO DRAIN
  - COMPOSITE ROOF DECK, REFER TO STRUCTURAL DRAWINGS
- EPDM ROOF CONSTR. TYPE 12
  - SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
  - 5/8" COVERBOARD
  - (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), PITCHED TO DRAIN
  - SLOPED STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS
- PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 20
  - DECORATIVE PVC BATTENS
  - FULLY ADHERED PVC MEMBRANE ROOFING
  - 5/8" COVERBOARD
  - (2) LAYERS OF RIGID INSUL. WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.)
  - STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS
- PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 21
  - DECORATIVE PVC BATTENS
  - FULLY ADHERED PVC MEMBRANE ROOFING
  - 5/8" COVERBOARD
  - STRUCTURAL METAL ROOF DECK
- WALKWAY PAD
- RD - ROOF DRAIN
- CRICKET AS REQUIRED

GENERAL NOTES:
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3. REFER TO SHEET A0.3 FOR INTERIOR PARTITION TYPES.
4. REFER TO INTERIOR ELEVATIONS FOR TACK BOARD AND MARKERBOARD DIMENSIONS.

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

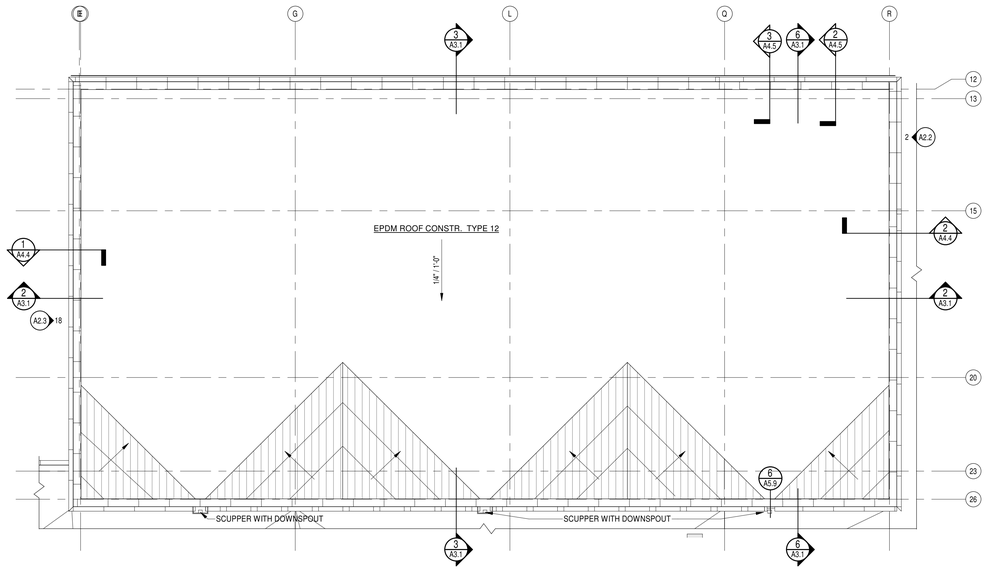
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
PARTIAL LOWER ROOF CONSTRUCTION PLAN - WEST

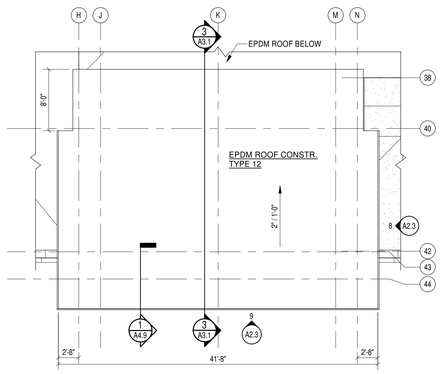
DATE 11/2/2018

DWG. NO.
A1.4

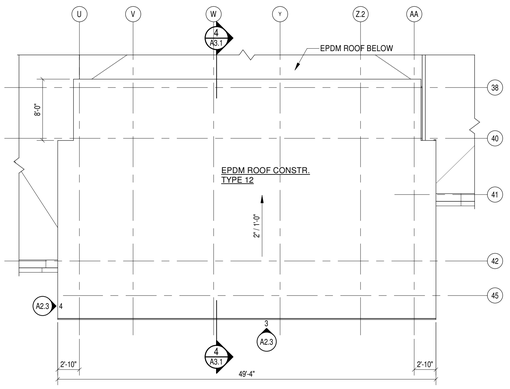
MPN Project Number: 2017225.00



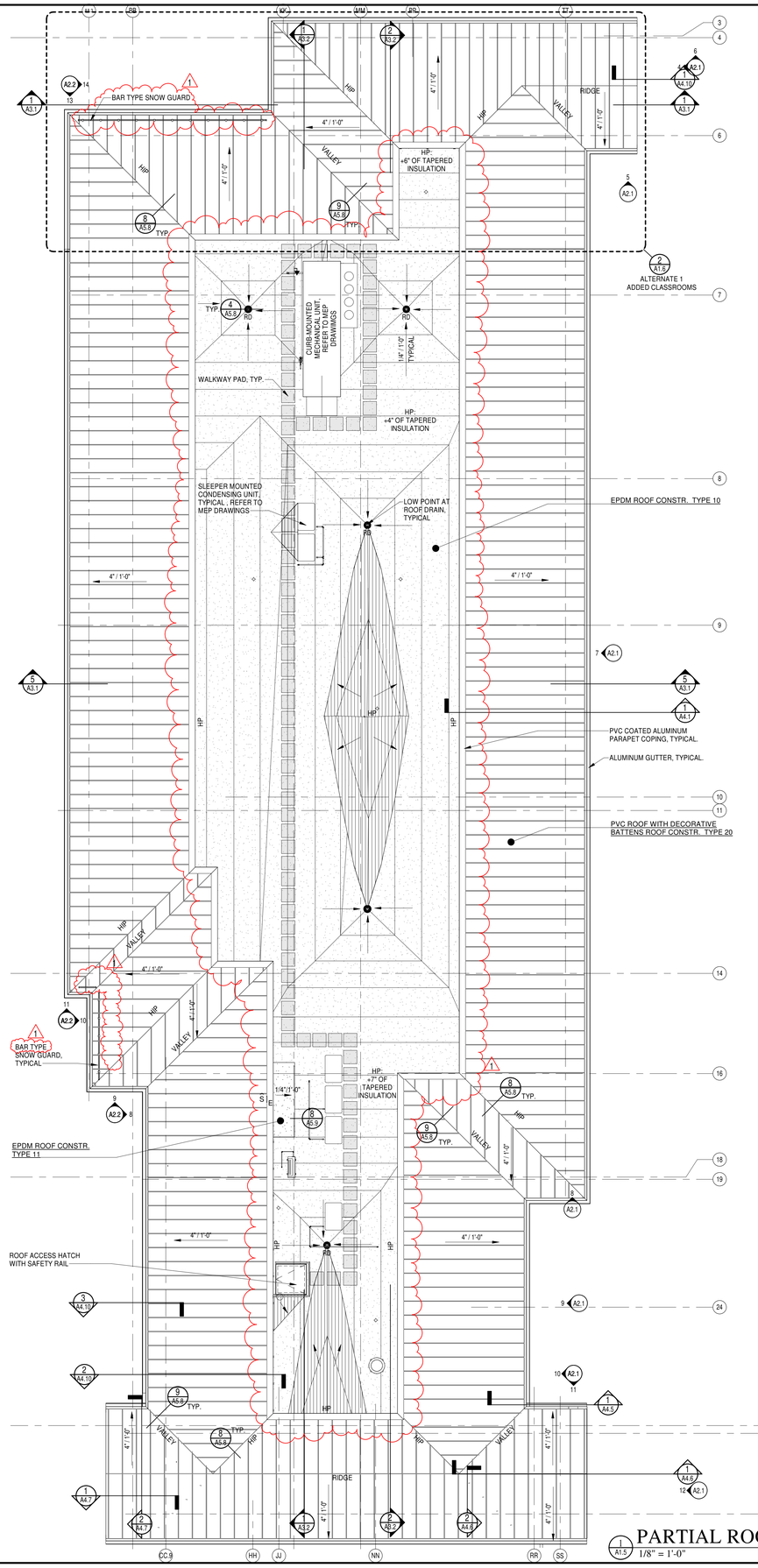
2 A1.5 PARTIAL ROOF PLAN - GYMNASIUM
1/8" = 1'-0"



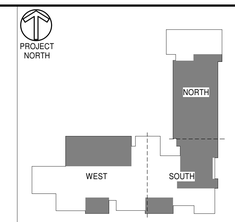
3 A1.5 PARTIAL ROOF PLAN - CAFETERIA
1/8" = 1'-0"



4 A1.5 PARTIAL ROOF PLAN - MEDIA CENTER
1/8" = 1'-0"



1 A1.5 PARTIAL ROOF PLAN - UPPER ROOF
1/8" = 1'-0"



KEYPLAN

ROOF PLAN LEGEND

EPDM ROOF CONSTR. TYPE 10
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), WITH TAPERED INSULATION AND CRICKETS AS REQUIRED TO PITCH TO DRAIN
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 11
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), TAPERED INSULATION AND CRICKETS TO PITCH TO DRAIN
- COMPOSITE ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 12
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), PITCHED TO DRAIN
- SLOPED STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

25° TYP.

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 20
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- (2) LAYERS OF RIGID INSUL. WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.)
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

25° TYP.

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 21
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- STRUCTURAL METAL ROOF DECK

WALKWAY PAD

RD - ROOF DRAIN

CRICKET AS REQUIRED

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

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SOUTH WINDSOR, CT 06074

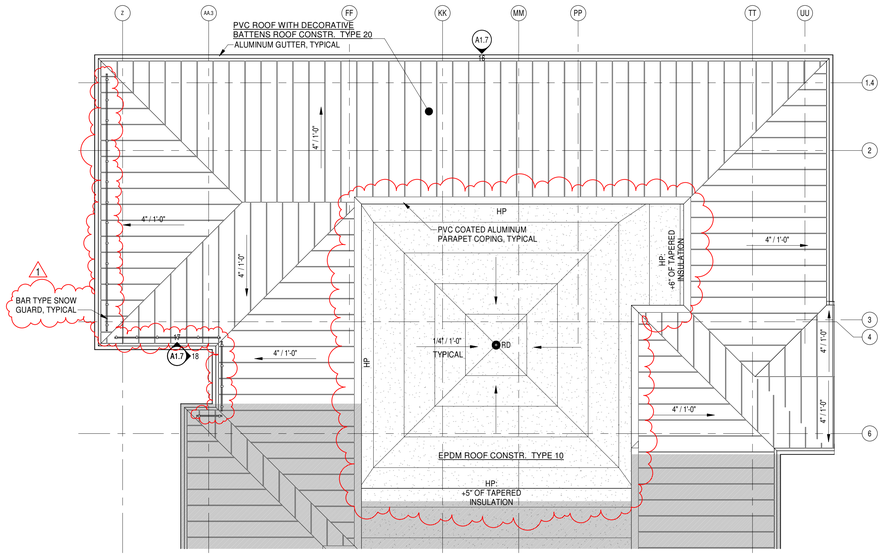
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
PARTIAL UPPER ROOF CONSTRUCTION PLANS

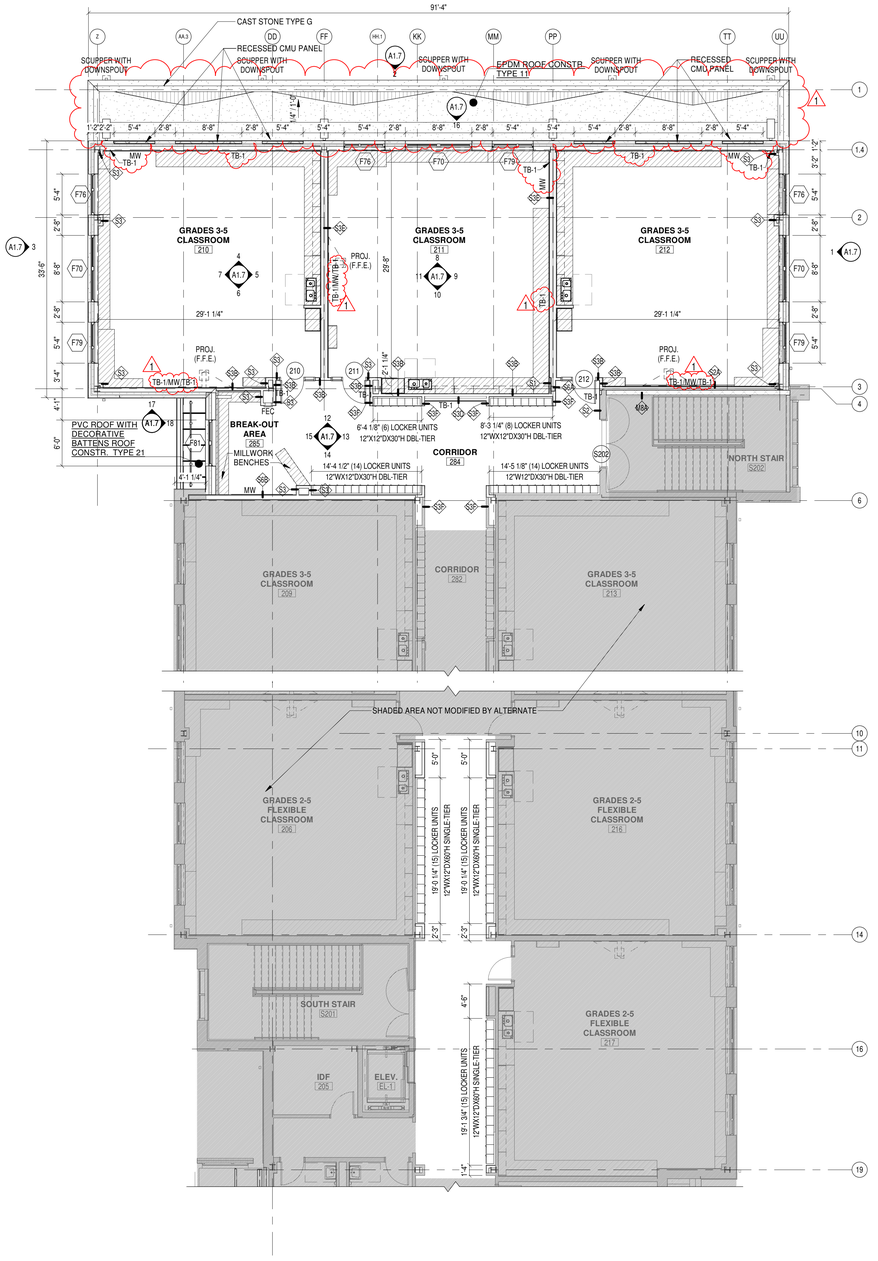
DATE 11/2/2018

DWG. NO.
A1.5

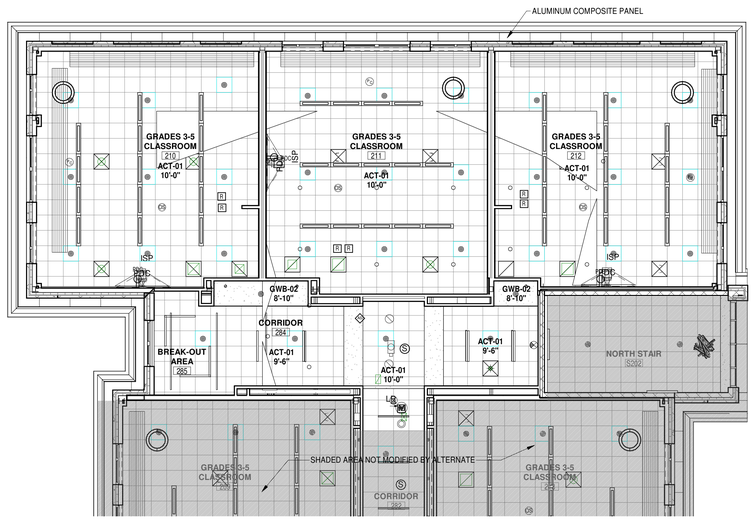
MPN Project Number: 2017225.00



2 / A1.6 PARTIAL ROOF PLAN
1/8" = 1'-0"

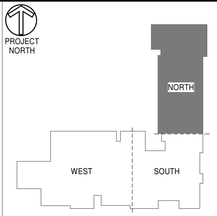


1 / A1.6 PARTIAL SECOND FLOOR PLAN
1/8" = 1'-0"



6 / A1.6 PARTIAL SECOND FLOOR CEILING PLAN
1/8" = 1'-0"

PROJECT NORTH



KEYPLAN

ROOF PLAN LEGEND

EPDM ROOF CONSTR. TYPE 10
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), WITH TAPERED INSULATION AND CRICKETS AS REQUIRED TO PITCH TO DRAIN
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 11
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), TAPERED INSULATION AND CRICKETS TO PITCH TO DRAIN
- COMPOSITE ROOF DECK, REFER TO STRUCTURAL DRAWINGS

EPDM ROOF CONSTR. TYPE 12
- SINGLE-PLY FULLY ADHERED ROOF MEMBRANE
- 5/8" COVERBOARD
- (2) LAYERS RIGID INSULATION WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.), PITCHED TO DRAIN
- SLOPED STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 20
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- (2) LAYERS OF RIGID INSUL. WITH STAGGERED JOINTS 5.5" TOTAL (R-30 MIN.)
- STRUCTURAL METAL ROOF DECK, REFER TO STRUCTURAL DRAWINGS

PVC ROOF WITH DECORATIVE BATTENS ROOF CONSTR. TYPE 21
- DECORATIVE PVC BATTENS
- FULLY ADHERED PVC MEMBRANE ROOFING
- 5/8" COVERBOARD
- STRUCTURAL METAL ROOF DECK

WALKWAY PAD

RD - ROOF DRAIN

CRICKET AS REQUIRED

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

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WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
ALTERNATE 1 - ADDED CLASSROOMS PLANS AND CEILING PLAN

DATE 11/2/2018

DWG. NO.
A1.6

MPN Project Number: 2017325.00

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.

132-0089 N
PHASE 2 OF 5

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MOSER PILON NELSON ARCHITECTS

30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE

EXTERIOR DETAILS

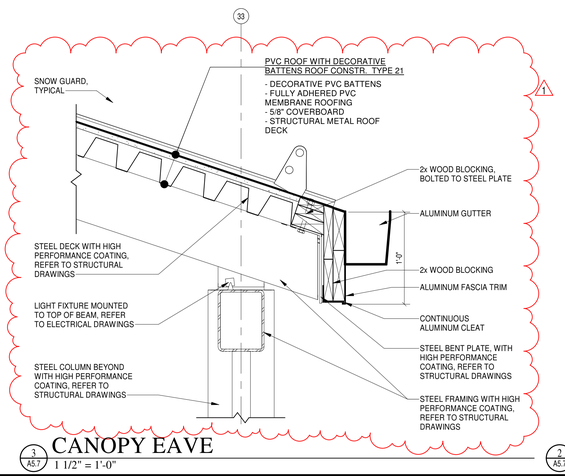
DATE 11/2/2018

DWG. NO.

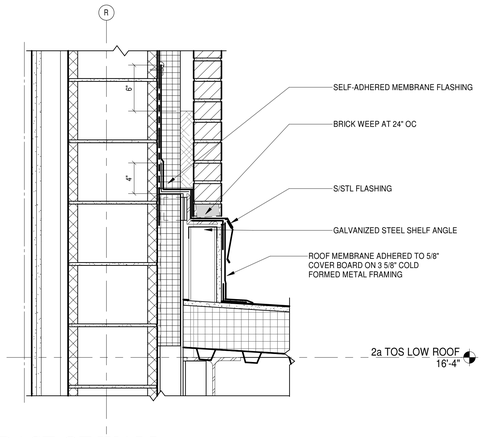
A5.7

MPN Project Number: 20172225.00

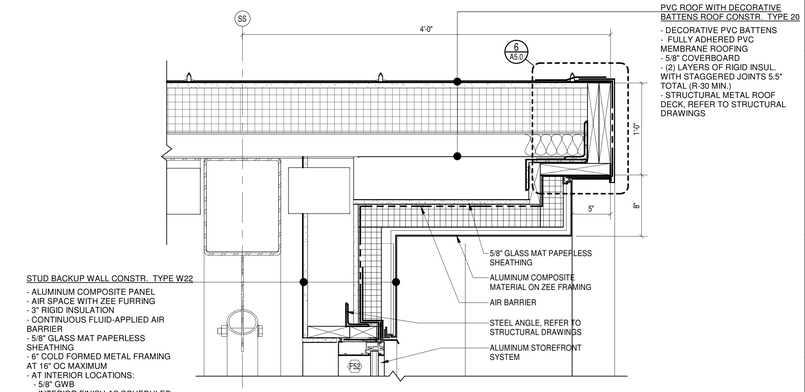
4/A5.7 CANOPY RAKE
1 1/2" = 1'-0"



3/A5.7 CANOPY EAVE
1 1/2" = 1'-0"

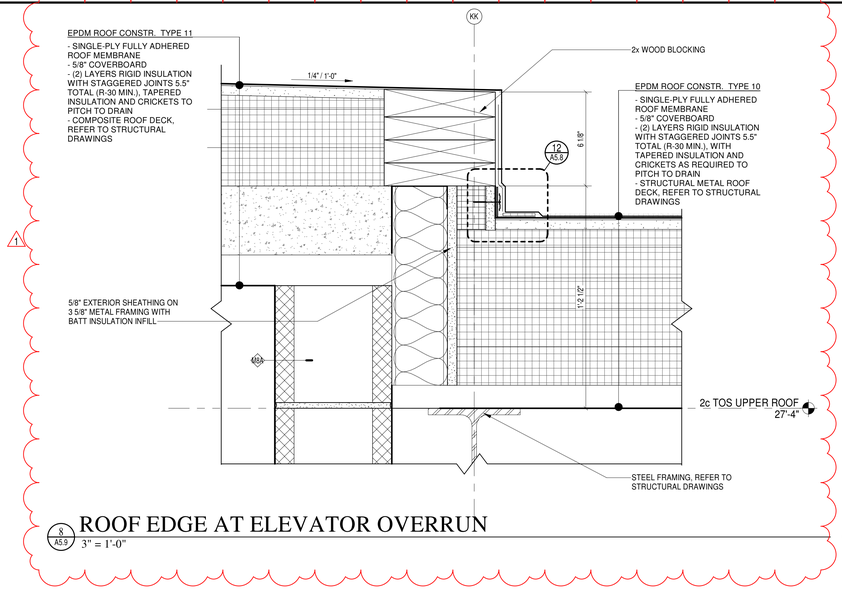


2/A5.7 BASE OF WALL
1 1/2" = 1'-0"

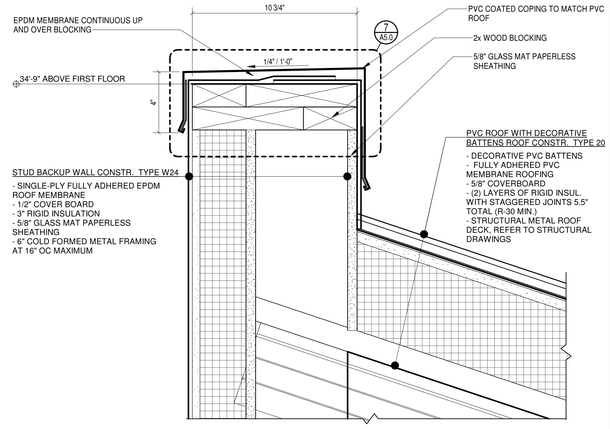


1/A5.7 GABLE END DETAIL
1 1/2" = 1'-0"

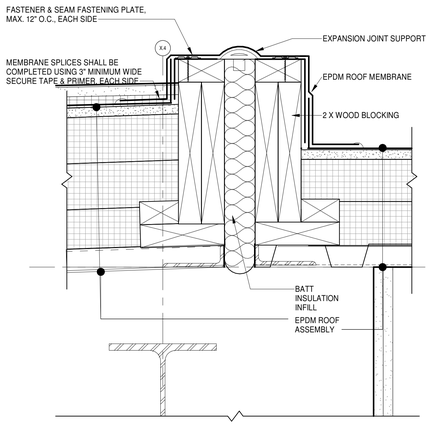
5/A5.7 EDGE OF FIRE RATED PANEL
1 1/2" = 1'-0"



X A5.9 ROOF EDGE AT ELEVATOR OVERRUN
3" = 1'-0"

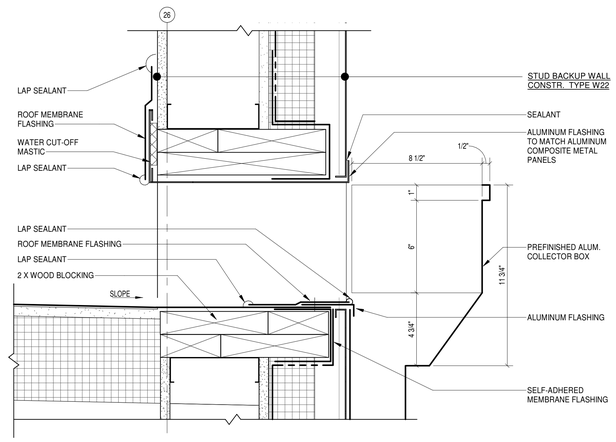


9 A5.9 PARAPET COPING DETAIL
3" = 1'-0"

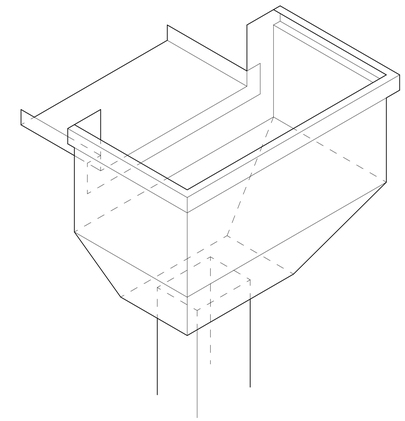


NOTES:
1. WHEN EXPANSION JOINT SUPPORT IS USED, WIDTH OF JOINT SHALL BE A MINIMUM OF 3/4" AND SHALL NOT EXCEED 3".
2. MEMBRANE SPLICES SHALL BE COMPLETED USING MINIMUM 3" WIDE TAPE & PRIMER WITH EPDM MEMBRANE AND MINIMUM 1 1/2" HOT AIR WELD WITH TPO/PVC.
3. ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH A PRESSURE-SENSITIVE T-JOINT COVER. PRIOR TO DOING SO, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6" x 6" T-JOINT COVER) COVERING TO EXPOSED SPLICE TAPE 2" IN EACH DIRECTION FROM THE SPLICE INTERSECTION. ALL INTERSECTIONS MUST BE OVERLAID WITH TWO LAYER OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" x 6" COVERED WITH A 12" x 12" TOP LAYER. BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT.
4. ROOF MEMBRANE SHALL NOT BE ADHERED OVER THE EXPANSION JOINT SUPPORT OR SPONGE TUBING.
5. FOR EPDM APPLICATIONS, USE TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING WITH EACH LAYER 3" LARGER THAN THE PREVIOUS LAYER IN ALL DIRECTIONS FOR EXPANSION JOINT INTERSECTIONS BETWEEN EXPANSION JOINT OF WALL OR EDGING.

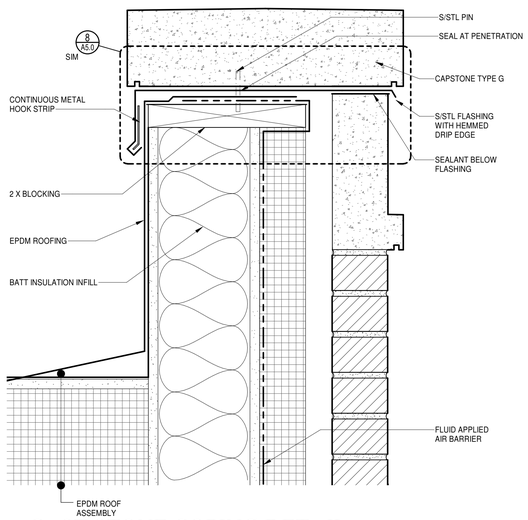
7 A5.9 ROOF SEISMIC JOINT
3" = 1'-0"



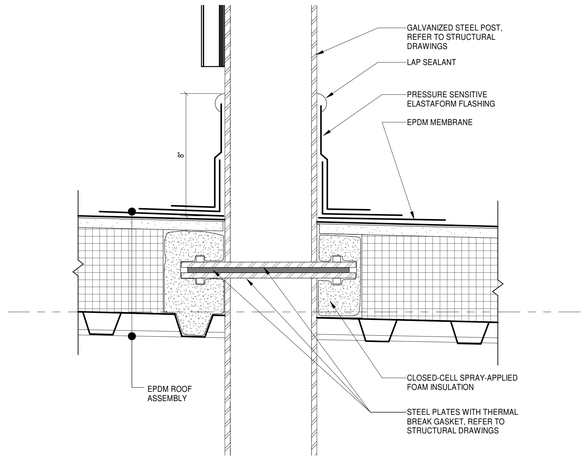
6 A5.9 GYM SCUPPER DETAIL
3" = 1'-0"



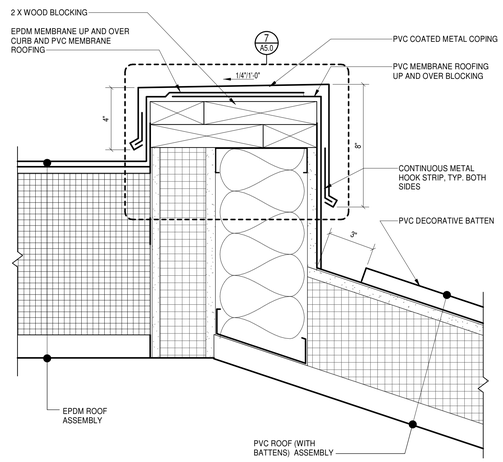
5 A5.9 TYPICAL COLLECTOR BOX
3" = 1'-0"



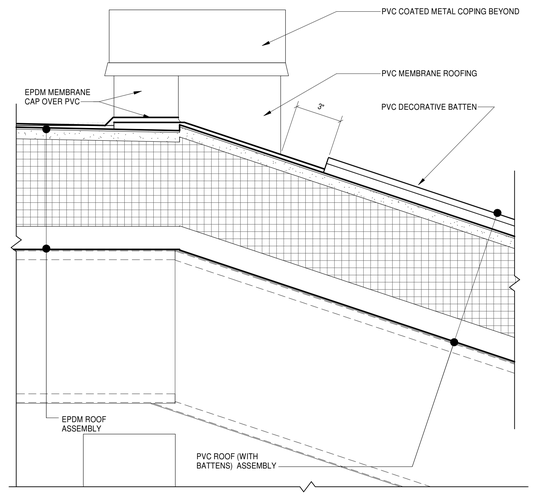
4 A5.9 CAST STONE COPING DETAIL
3" = 1'-0"



3 A5.9 SCREENWALL POST FLASHING
3" = 1'-0"



2 A5.9 PARAPET AT LOW ROOF DETAIL
3" = 1'-0"



1 A5.9 PARAPET SCUPPER AT LOW ROOF DETAIL
3" = 1'-0"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE
ROOF DETAILS

DATE 11/2/2018

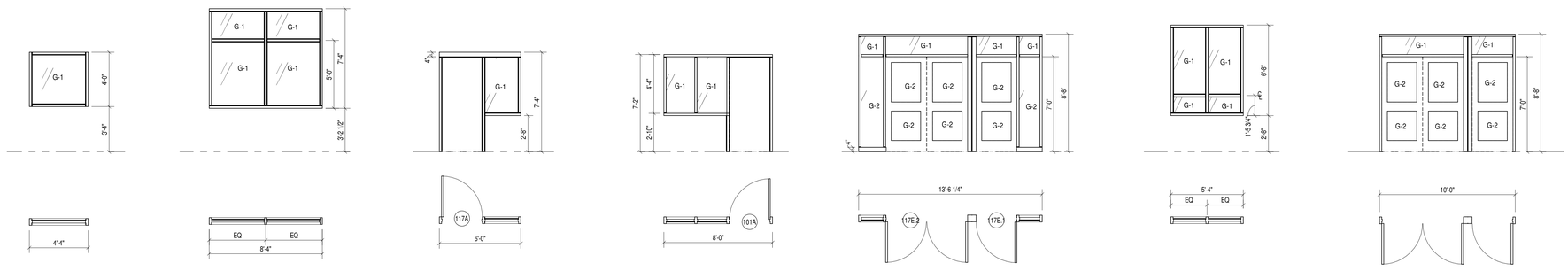
DWG. NO.
A5.9

MPN Project Number: 20172225.00

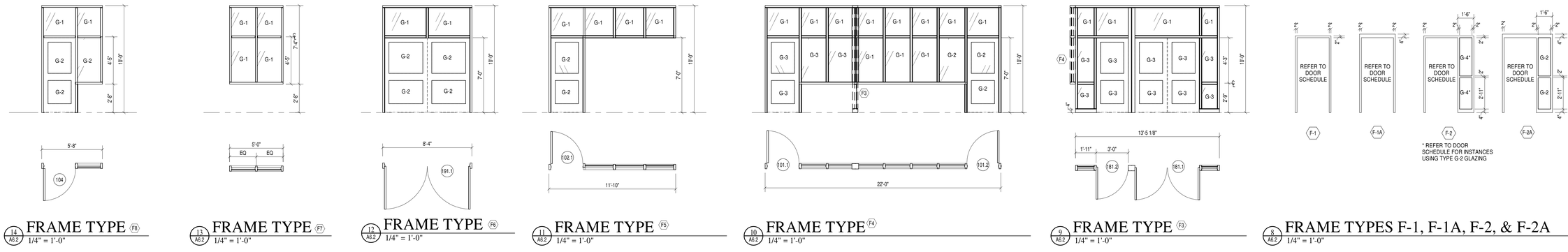
GLAZING LEGEND

- **G-1:** CLEAR FLOAT GLASS
- **G-2:** FULLY-TEMPERED CLEAR FLOAT GLASS
- **G-3:** SECURITY GLAZING - LAMINATED CLEAR
- **G-4:** SECURITY GLAZING - FULLY-TEMPERED CLEAR WITH APPLIED FILM
- **MP-1:** INSULATED METAL INFILL PANEL
- **IG-1:** INSULATING GLAZING - CLEAR
- **IG-2:** INSULATED FULLY-TEMPERED GLAZING - CLEAR
- **IG-3:** INSULATED SECURITY GLAZING - CLEAR
- **IG-4:** INSULATED GLAZING - FROSTED
- **IG-5:** INSULATED GLAZING - SPANDREL
- **IG-6:** INSULATED SECURITY GLAZING - FROSTED

GLAZING NOTES:
1. REFER TO SPECIFICATIONS FOR COMPLETE GLAZING DESCRIPTIONS



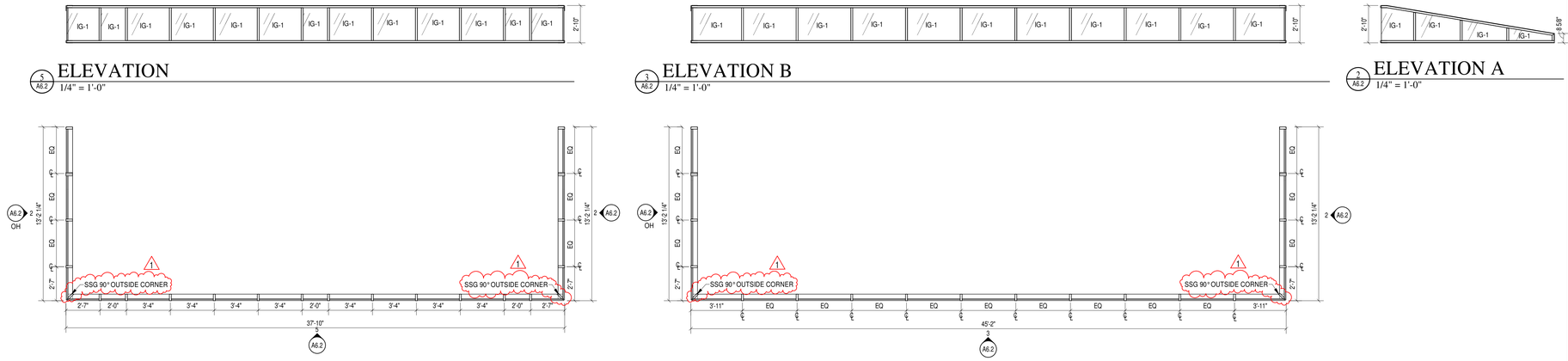
21 A6.2 FRAME TYPE F15 — 1/4" = 1'-0"
20 A6.2 FRAME TYPE F14 — 1/4" = 1'-0"
19 A6.2 FRAME TYPE F13 — 1/4" = 1'-0"
18 A6.2 FRAME TYPE F12 — 1/4" = 1'-0"
17 A6.2 FRAME TYPE F11 — 1/4" = 1'-0"
16 A6.2 FRAME TYPE F10 — 1/4" = 1'-0"
15 A6.2 FRAME TYPE F9 — 1/4" = 1'-0"



14 A6.2 FRAME TYPE F8 — 1/4" = 1'-0"
13 A6.2 FRAME TYPE F7 — 1/4" = 1'-0"
12 A6.2 FRAME TYPE F6 — 1/4" = 1'-0"
11 A6.2 FRAME TYPE F5 — 1/4" = 1'-0"
10 A6.2 FRAME TYPE F4 — 1/4" = 1'-0"
9 A6.2 FRAME TYPE F3 — 1/4" = 1'-0"
8 A6.2 FRAME TYPES F-1, F-1A, F-2, & F-2A — 1/4" = 1'-0"

HOLLOW METAL FRAME TYPES

7 A6.2 FRAME TYPE F31 — 1/4" = 1'-0"
6 A6.2 FRAME TYPE F30 — 1/4" = 1'-0"



5 A6.2 ELEVATION — 1/4" = 1'-0"
3 A6.2 ELEVATION B — 1/4" = 1'-0"
2 A6.2 ELEVATION A — 1/4" = 1'-0"

4 A6.2 FRAME TYPE F55 — 1/4" = 1'-0"
1 A6.2 FRAME TYPE F54 — 1/4" = 1'-0"

ALUMINUM CURTAIN WALL FRAME TYPES

MPA Project Number: 2017235.00

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

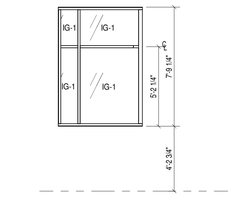
TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

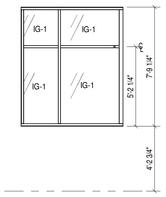
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

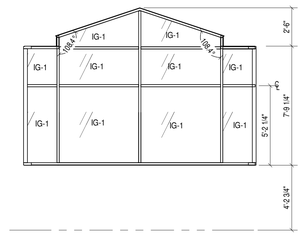
TITLE
FRAME TYPES

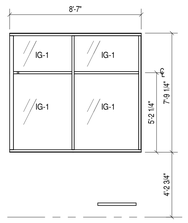
DATE 11/2/2018

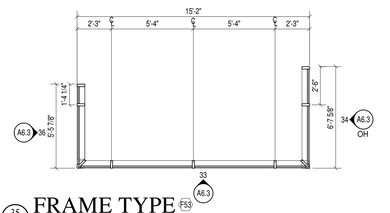
DWG. NO.
A6.2

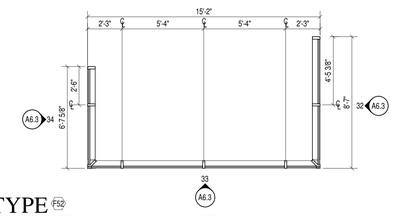


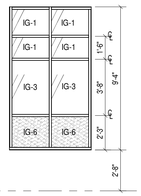


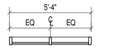


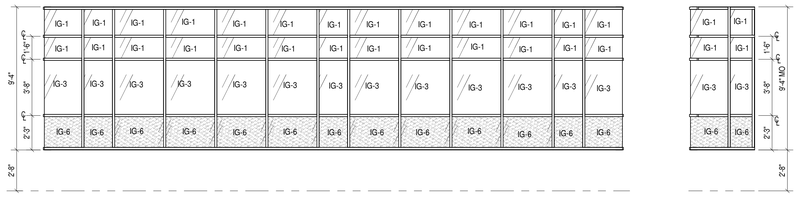


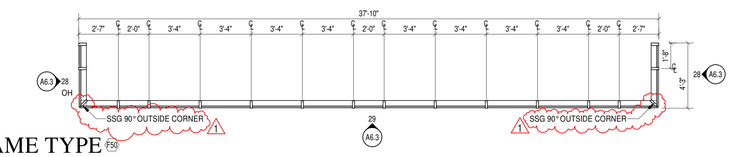


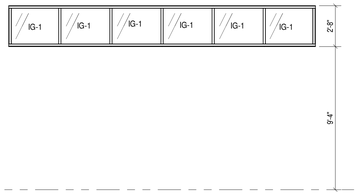


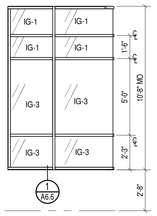


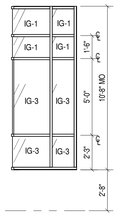


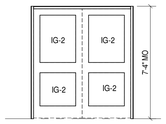


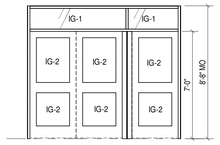


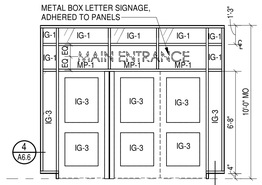












GLAZING LEGEND

▨	**G-1:** CLEAR FLOAT GLASS	▨	**IG-1:** INSULATING GLAZING - CLEAR
▨	**G-2:** FULLY-TEMPERED CLEAR FLOAT GLASS	▨	**IG-2:** INSULATED FULLY-TEMPERED GLAZING - CLEAR
▨	**G-3:** SECURITY GLAZING - LAMINATED CLEAR	▨	**IG-3:** INSULATED SECURITY GLAZING - CLEAR
▨	**G-4:** SECURITY GLAZING - FULLY-TEMPERED CLEAR WITH APPLIED FILM	▨	**IG-4:** INSULATED GLAZING - FROSTED
☐	**MP-1:** INSULATED METAL INFILL PANEL	▨	**IG-5:** INSULATED GLAZING - SPANDREL
		▨	**IG-6:** INSULATED SECURITY GLAZING - FROSTED

GLAZING NOTES
1. REFER TO SPECIFICATIONS FOR COMPLETE GLAZING DESCRIPTIONS

36 A6.3 ELEVATION
1/4" = 1'-0"

34 A6.3 ELEVATION C
1/4" = 1'-0"

33 A6.3 ELEVATION B
1/4" = 1'-0"

32 A6.3 ELEVATION A
1/4" = 1'-0"

29 A6.3 ELEVATION B
1/4" = 1'-0"

28 A6.3 ELEVATION A
1/4" = 1'-0"

35 A6.3 FRAME TYPE F53
1/4" = 1'-0"

31 A6.3 FRAME TYPE F52
1/4" = 1'-0"

30 A6.3 FRAME TYPE F51
1/4" = 1'-0"

27 A6.3 FRAME TYPE F50
1/4" = 1'-0"

26 A6.3 FRAME TYPE F49
1/4" = 1'-0"

ALUMINUM CURTAIN WALL FRAME TYPES

1

25 A6.3 ELEVATION B
1/4" = 1'-0"

24 A6.3 ELEVATION A
1/4" = 1'-0"

23 A6.3 FRAME TYPE F48
1/4" = 1'-0"

22 A6.3 FRAME TYPE F47
1/4" = 1'-0"

21 A6.3 FRAME TYPE F46
1/4" = 1'-0"

20 A6.3 FRAME TYPE F45
1/4" = 1'-0"

19 A6.3 FRAME TYPE F44
1/4" = 1'-0"

18 A6.3 FRAME TYPE F43
1/4" = 1'-0"

17 A6.3 FRAME TYPE F42
1/4" = 1'-0"

16 A6.3 FRAME TYPE F85
1/4" = 1'-0"

15 A6.3 FRAME TYPE F84
1/4" = 1'-0"

14 A6.3 FRAME TYPE F83
1/4" = 1'-0"

13 A6.3 FRAME TYPE F82
1/4" = 1'-0"

12 A6.3 FRAME TYPE F81
1/4" = 1'-0"

11 A6.3 FRAME TYPE F80
1/4" = 1'-0"

10 A6.3 FRAME TYPE F79
1/4" = 1'-0"

25QE A6.3 FRAME TYPE F78
1/4" = 1'-0"

8 A6.3 FRAME TYPE F77
1/4" = 1'-0"

7 A6.3 FRAME TYPE F76
1/4" = 1'-0"

6 A6.3 FRAME TYPE F75
1/4" = 1'-0"

5 A6.3 FRAME TYPE F74
1/4" = 1'-0"

4 A6.3 FRAME TYPE F73
1/4" = 1'-0"

3 A6.3 FRAME TYPE F72
1/4" = 1'-0"

2 A6.3 FRAME TYPE F71
1/4" = 1'-0"

1 A6.3 FRAME TYPE F70
1/4" = 1'-0"

ALUMINUM WINDOW SYSTEM TYPES

MPN Project Number: 2017225.00

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.

132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

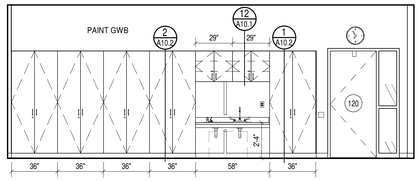
MOSER
PILON
NELSON
ARCHITECTS

30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

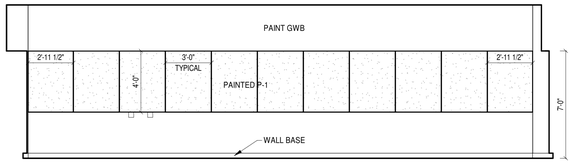
TITLE
FRAME TYPES

DATE 11/2/2018

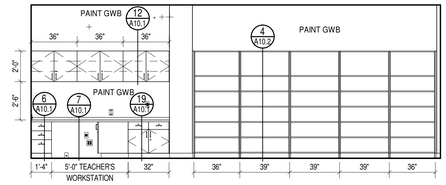
DWG. NO.
A6.3



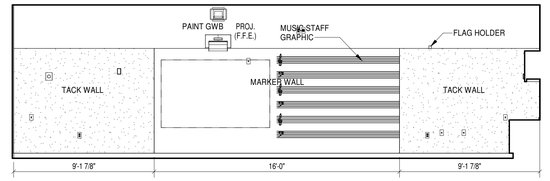
19 A8.7 GENERAL MUSIC 120 - WEST
1/4" = 1'-0"



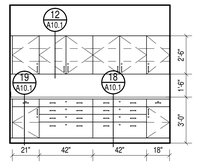
18 A8.7 GENERAL MUSIC 120 - SOUTH
1/4" = 1'-0"



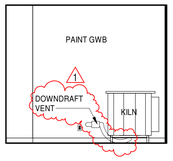
17 A8.7 GENERAL MUSIC 120 - EAST
1/4" = 1'-0"



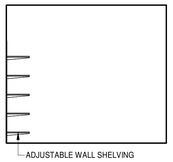
16 A8.7 GENERAL MUSIC 120 - NORTH
1/4" = 1'-0"



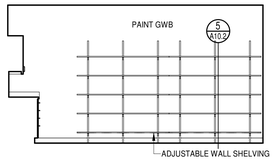
15 A8.7 KILN 119B - WEST
1/4" = 1'-0"



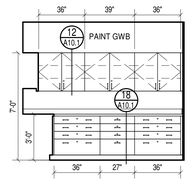
14 A8.7 KILN 119B - EAST
1/4" = 1'-0"



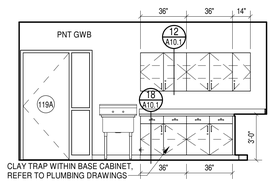
13 A8.7 VISUAL ARTS STOR. 119A - W
1/4" = 1'-0"



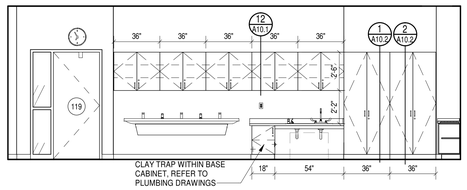
12 A8.7 VISUAL ARTS STOR. 119A - S
1/4" = 1'-0"



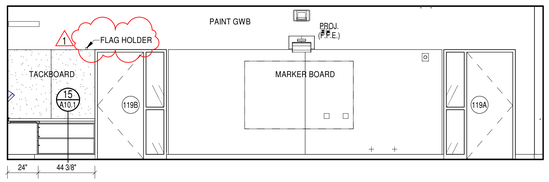
11 A8.7 VISUAL ARTS STOR. 119A - E
1/4" = 1'-0"



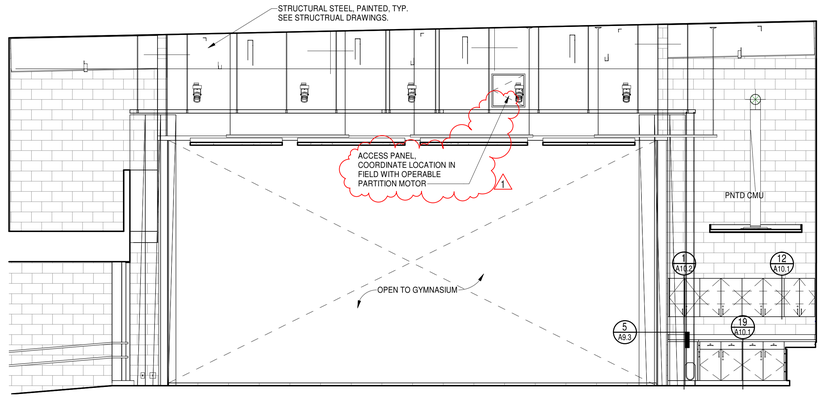
10 A8.7 VISUAL ARTS STOR. 119A - N
1/4" = 1'-0"



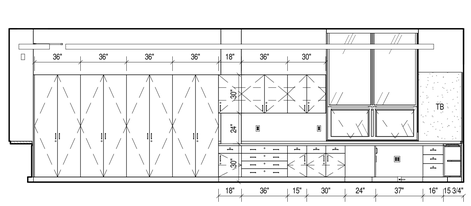
9 A8.7 VISUAL ARTS CLASSROOM 119 - WEST
1/4" = 1'-0"



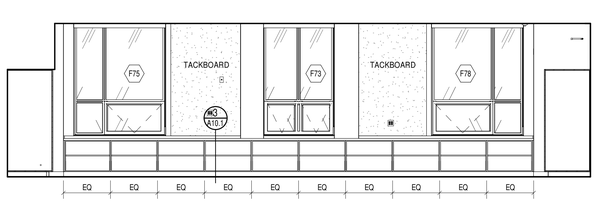
8 A8.7 VISUAL ARTS CLASSROOM 119 - SOUTH
1/4" = 1'-0"



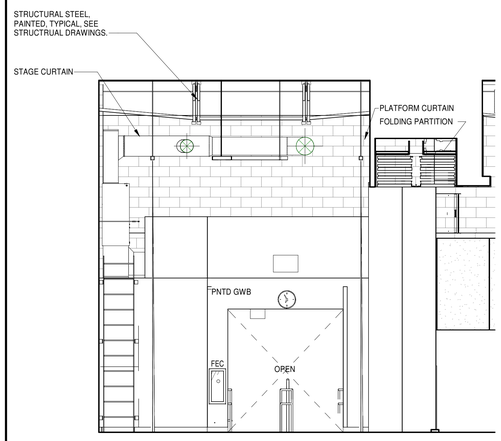
5 A8.7 INSTR. MUSIC/PLATFORM 118 - WEST
1/4" = 1'-0"



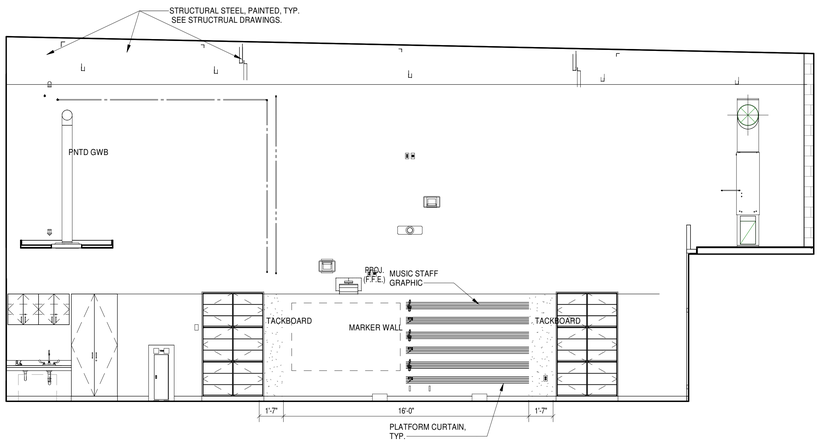
7 A8.7 VISUAL ARTS CLASSROOM 119 - EAST
1/4" = 1'-0"



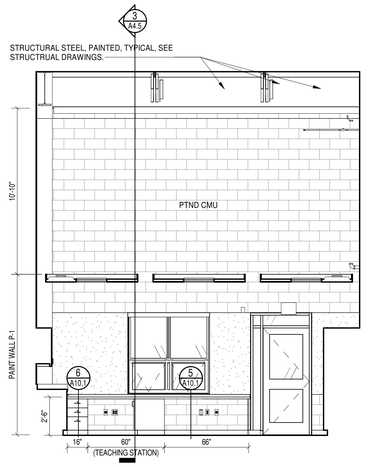
6 A8.7 VISUAL ARTS CLASSROOM 119 - NORTH
1/4" = 1'-0"



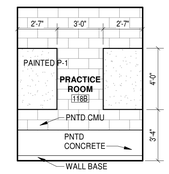
4 A8.7 INSTR. MUSIC/PLATFORM 118 - SOUTH
1/4" = 1'-0"



3 A8.7 INSTR. MUSIC/PLATFORM 118 - EAST
1/4" = 1'-0"



2 A8.7 INSTR. MUSIC/PLATFORM 118 - NORTH
1/4" = 1'-0"



1 A8.7 PRACTICE RM 118B - N
1/4" = 1'-0"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

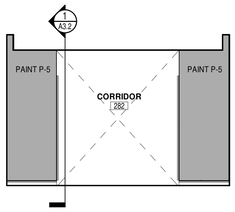
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE
INTERIOR ELEVATIONS

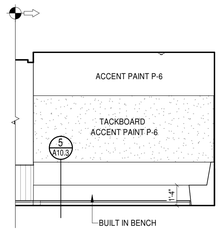
DATE 11/2/2018

DWG. NO.
A8.7

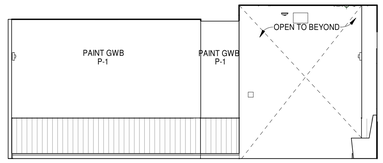
MPN Project Number: 20172225.00



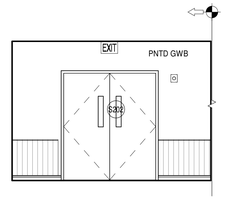
21 A8.13 CORRIDOR 282
1/4" = 1'-0"



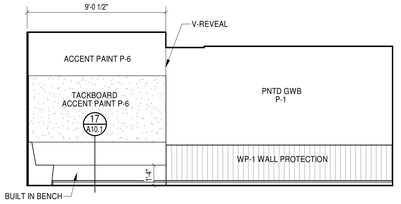
20 A8.13 CORRIDOR 284 - WEST
1/4" = 1'-0"



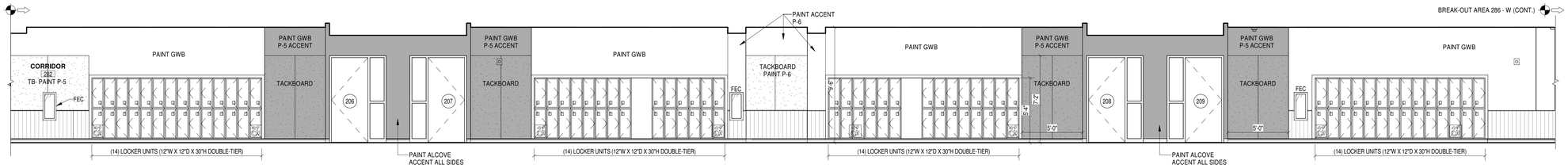
19 A8.13 CORRIDOR 284 - SOUTH
1/4" = 1'-0"



18 A8.13 CORRIDOR 284 - EAST
1/4" = 1'-0"

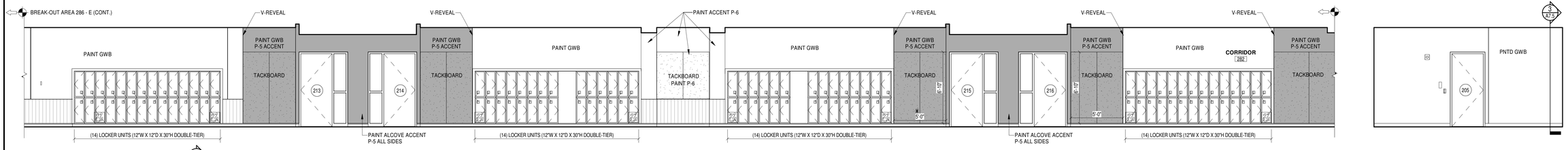


17 A8.13 CORRIDOR 284 - NORTH
1/4" = 1'-0"



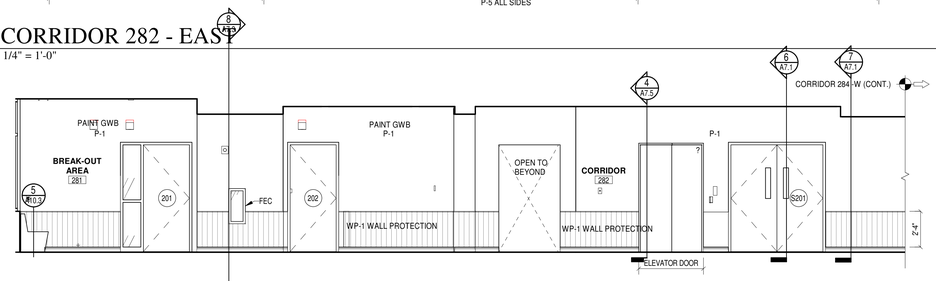
16 A8.13 CORRIDOR 282 - WEST
1/4" = 1'-0"

15 A8.13 CORRIDOR 283 - SOUTH
1/4" = 1'-0"

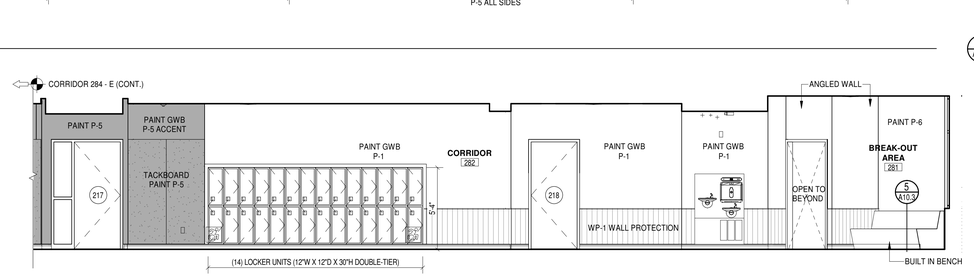


14 A8.13 CORRIDOR 282 - EAST
1/4" = 1'-0"

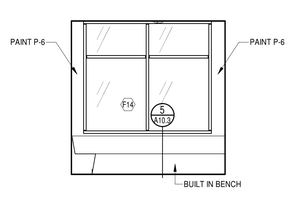
13 A8.13 CORRIDOR 283 - NORTH
1/4" = 1'-0"



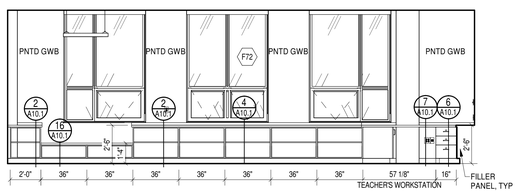
12 A8.13 CORRIDOR 182 - WEST (CONT. CORRIDOR 284 - WEST))
1/4" = 1'-0"



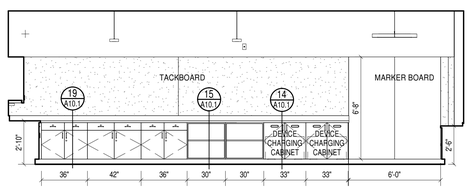
11 A8.13 CORRIDOR 282 - EAST (CONT. CORRIDOR 284 - EAST))
1/4" = 1'-0"



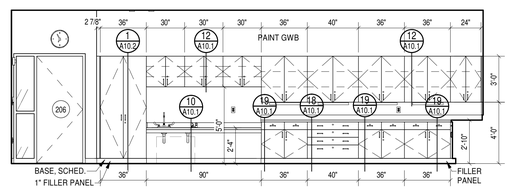
10 A8.13 BREAK-OUT AREA 281 - S
1/4" = 1'-0"



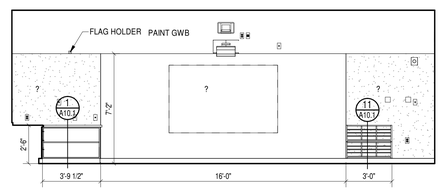
9 A8.13 WEST
1/4" = 1'-0"



8 A8.13 SOUTH
1/4" = 1'-0"

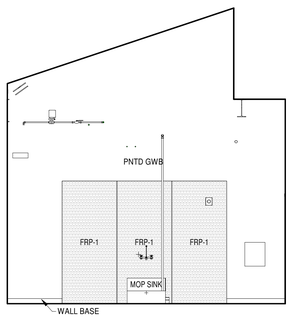


7 A8.13 EAST
1/4" = 1'-0"

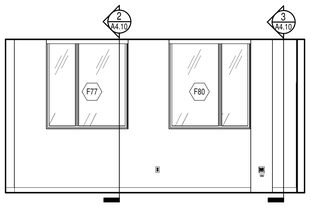


6 A8.13 NORTH
1/4" = 1'-0"

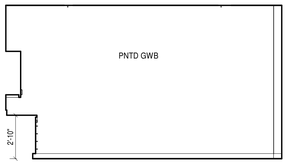
TYPICAL GRADES 3-5 CLASSROOM 206 (SIM. OPP. HD. 207, 208, 209, 210, 211, 212, 213, 214)



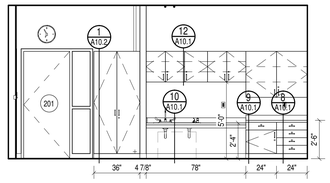
5 A8.13 GENERAL STORAGE - N
1/4" = 1'-0"



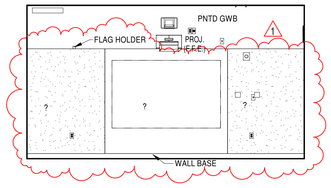
4 A8.13 SPECIAL ED. RESOURCE 201 - W
1/4" = 1'-0"



3 A8.13 SPECIAL ED. RESOURCE 201 - S
1/4" = 1'-0"



2 A8.13 SPECIAL ED. RESOURECE 201 - E
1/4" = 1'-0"



1 A8.13 SPECIAL ED. RESOURCE 201 - N
1/4" = 1'-0"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

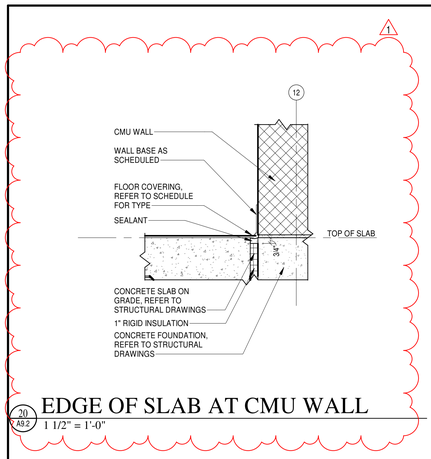
MOSER
PILON
NELSON
ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
INTERIOR
ELEVATIONS

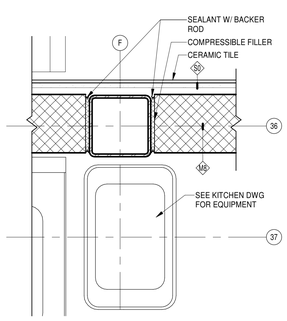
DATE 11/2/2018

DWG. NO.
A8.13

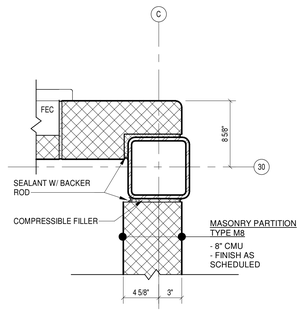
MPN Project Number: 20172215.00



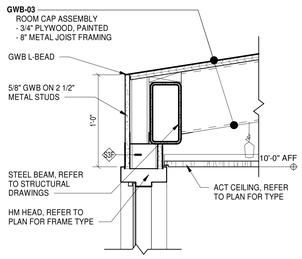
20 A9.2 EDGE OF SLAB AT CMU WALL
1 1/2" = 1'-0"



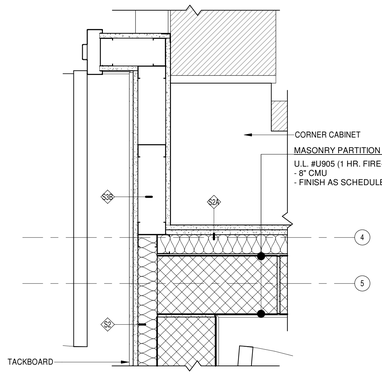
19 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



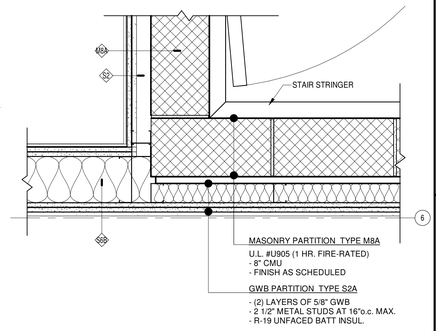
18 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



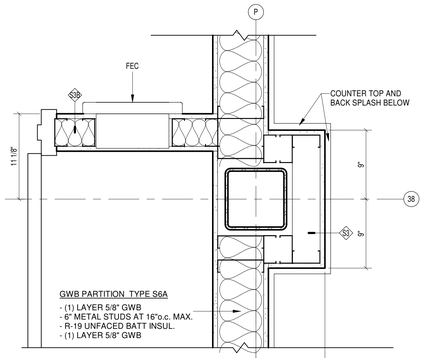
17 A9.2 DETAIL AT VESTIBULE CAP
1 1/2" = 1'-0"



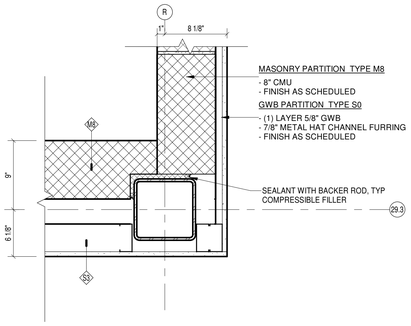
16 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



15 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



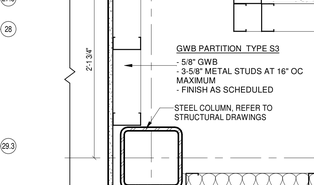
14 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



13 A9.2 PLAN DETAIL
1 1/2" = 1'-0"

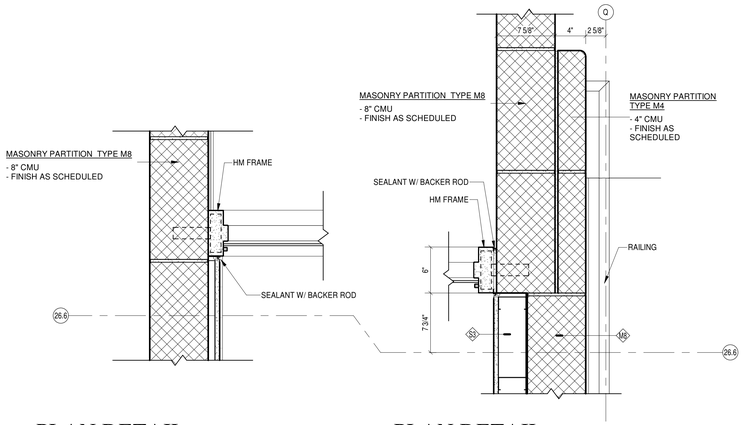
12 A9.2 MIRROR DETAIL
3" = 1'-0"

11 A9.2 PLAN DETAIL
1 1/2" = 1'-0"

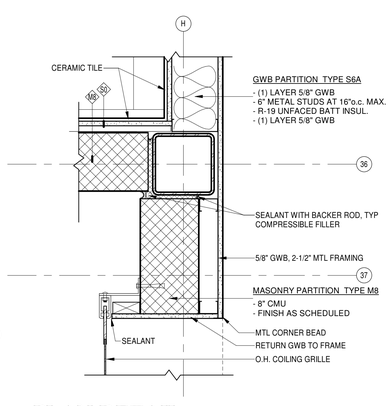


10 A9.2 PLAN DETAIL
1 1/2" = 1'-0"

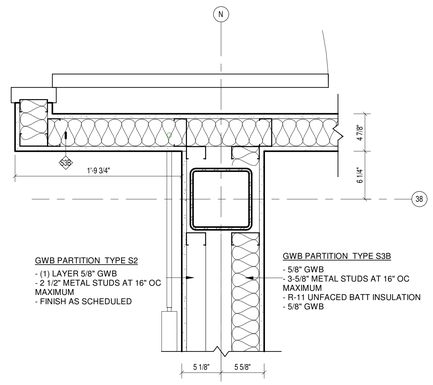
9 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



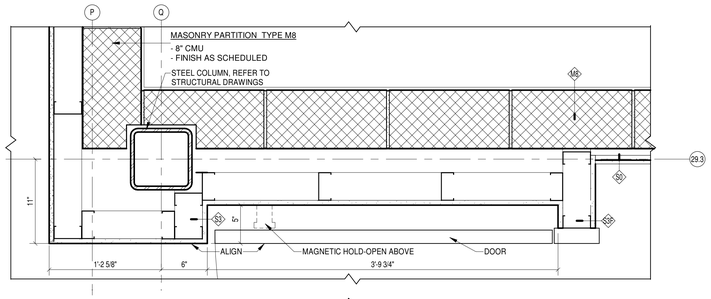
8 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



7 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



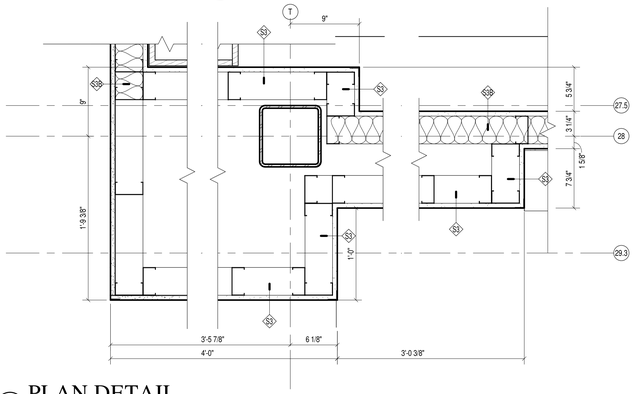
6 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



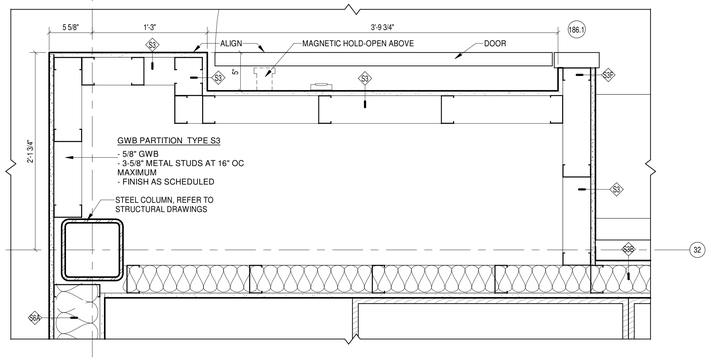
5 A9.2 PLAN DETAIL
1 1/2" = 1'-0"

4 A9.2 PLAN DETAIL
1 1/2" = 1'-0"

3 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



2 A9.2 PLAN DETAIL
1 1/2" = 1'-0"



1 A9.2 PLAN DETAIL AT POCKETED DOOR
1 1/2" = 1'-0"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

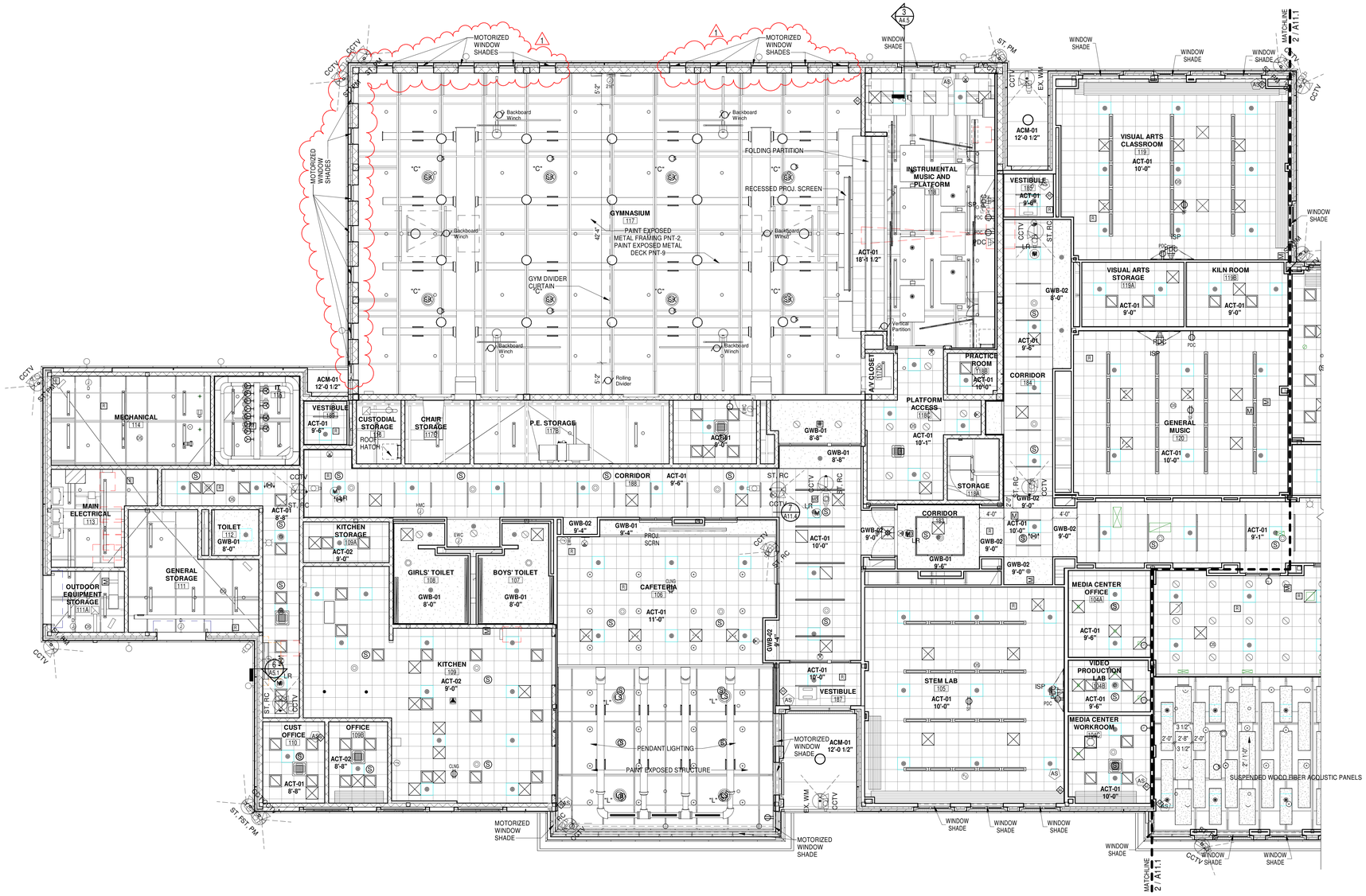
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
INTERIOR DETAILS

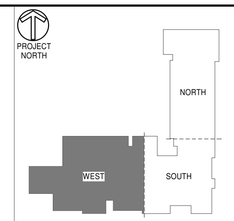
DATE 11/2/2018

DWG. NO.
A9.2

MPN Project Number: 2017225.00



2 PARTIAL FIRST FLOOR CEILING PLAN - WEST
A11.2 1/8" = 1'-0"



KEYPLAN

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

CEILING TYPES

- **ACT-01** 2'x2' SUSPENDED ACT TILE SYSTEM
- **ACT-02** 2'x2' SUSPENDED SCRUBBABLE ACT SYSTEM
- **ACT-03** 2'x2' SUSPENDED ACT TILE SYSTEM, SUSPENDED BY ACOUSTIC HANGERS; REFER TO CEILING DETAIL SHEET
- **GWB-01** 1/2" GWB ON SUSPENDED GRID
- **GWB-02** 1/2" GWB ON 3 5/8" METAL FRAMING
- **GWB-03** ROOM CAP ASSEMBLY
  - 3/4" PLYWOOD, PAINTED
  - 8" METAL JOIST FRAMING
- **GWB-04**
  - 1 HR FIRE RATED HORIZONTAL PANEL ASSEMBLY
  - 1" GYPSUM LINER PANEL
  - 4" C-H STUD, 400CH20-34
  - 5/8" GWB, TYPE X
  - ASSEMBLY EVALUATION REPORT: AER-09038
- **ACM-01**
  - ALUMINUM COMPOSITE PANEL
  - AIR SPACE WITH ZEE FURRING
  - 3" RIGID INSUL.
  - CONT. FLUID-APPLIED AIR BARRIER
  - 5/8" GLASS MAT PAPERLESS SHEATHING
  - 6" COLD FORMED METAL FRAMING AT 16" OC MAXIMUM

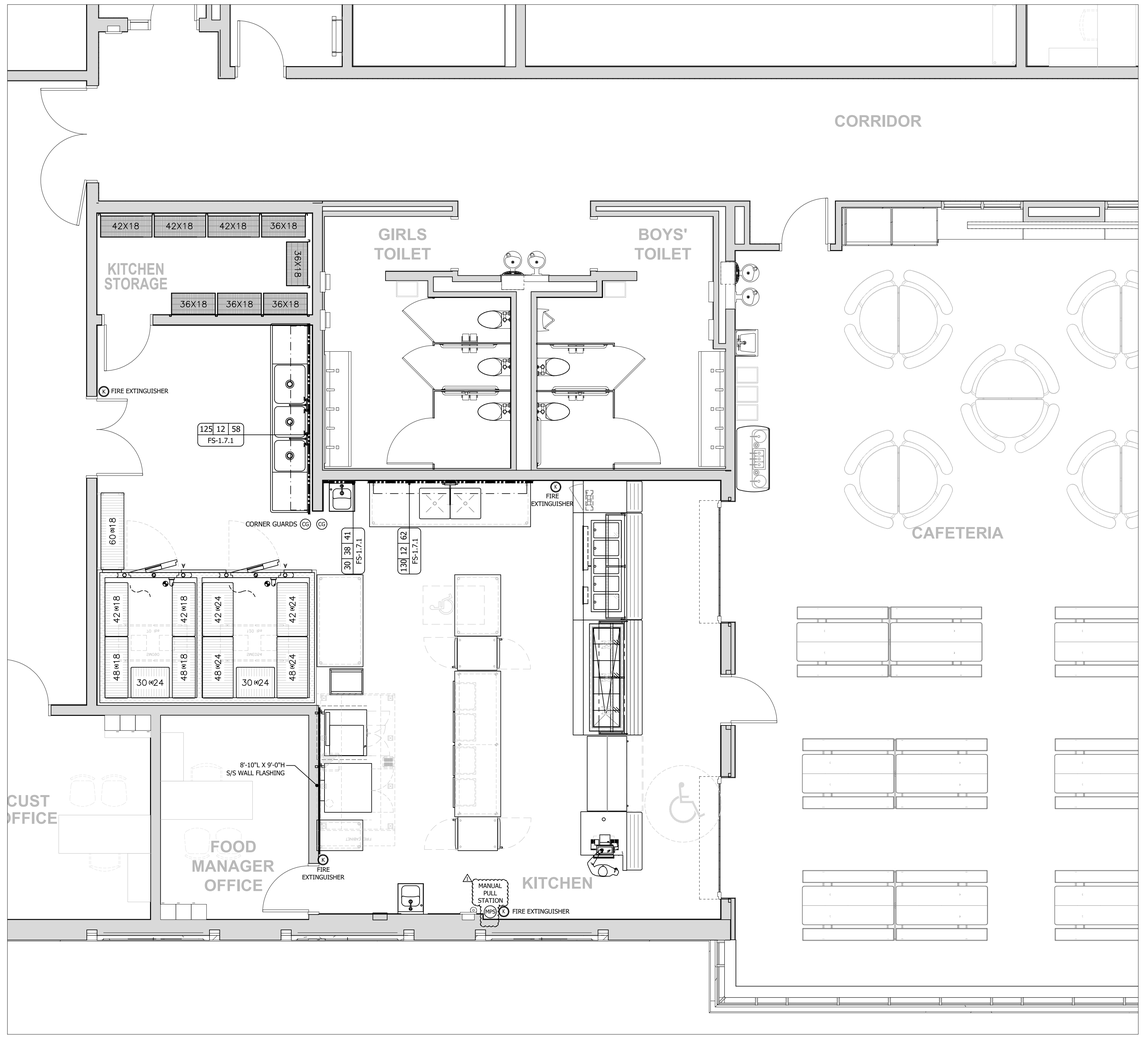
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
PARTIAL FIRST FLOOR CEILING PLAN - WEST

DATE 11/2/2018

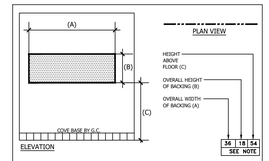
DWG. NO.
A11.2

MPN Project Number: 20172225.00



1 KITCHEN FOODSERVICE EQUIPMENT LIFE SAFETY & SPECIAL CONDITIONS PLAN

SCALE: 1/4"=1'-0"



* NOTE: WALL BACKING LENGTHS ARE MINIMUM. ALWAYS EXTEND TO NEXT STUD OVER IN EACH DIRECTION. SEE BUILDING CONDITIONS PLAN. MATERIAL: 16 Ga. GALVANIZED

1 / FS-1.7.1 EQUIPMENT WALL BACKING DETAIL
N.T.S.

SYMBOLS

WALL BACKING FOR EQUIPMENT ABOVE 36" (BY GENERAL CONTRACTOR)

LEGEND

SYMBOLS		ABBREVIATIONS	
R	REFRIGERATION CONNECTION	FS	FLOOR SINK
U	UTILITY CONNECTION	FT	FLOOR TROUGH
CC	CORNER GUARD	MPS	MANUAL PULL STATION
K	K-CLASS PORTABLE FIRE EXTINGUISHER	DN	DOWN FROM ABOVE
	UTILITY STUB UP FROM FIN FLOOR		
	BEVERAGE CONDUIT STUB UP		

HEALTH DEPT. NOTES

1. ALL FOOD SERVICE EQUIPMENT, FABRICATED ITEMS, AND THEIR INSTALLATION SHALL MEET NATIONAL SANITATION FOUNDATION (N.S.F.) REQUIREMENTS.
2. ALL STATIONARY EQUIPMENT AND FIXTURES TO BE SEALED TO THE WALL OR ADJACENT EQUIPMENT. USE ALUMINUM COLOR AT STAINLESS STEEL AND CLEAR AT ALL OTHERS.
3. ALL SINKS IN THE FOOD FACILITY MUST BE PROVIDED WITH HOT WATER (MIN. 110 DEG. F.) AND COLD RUNNING WATER UNDER PRESSURE AND WILL HAVE A PREMIXING FAUCET CAPABLE OF SUPPLYING WARM WATER FOR A MINIMUM OF 10 SECONDS.
4. A HAND SINK IS PROVIDED IN EACH FOOD PREPARATION AREA WITH SINGLE SERVICE TOWEL AND SOAP DISPENSER.
5. 3-COMPARTMENT SINKS ARE PROVIDED WITH MIXING VALVE FAUCETS CAPABLE OF REACHING EACH COMPARTMENT.
6. A MIN. OF 20 FOOT CANDLES (215 LUX) OF LIGHT, MEASURED 30" OFF THE FLOOR TO BE PROVIDED IN ALL FOOD PREPARATION, PACKAGING, AND PROCESSING AREAS AND WHERE UTENSILS
7. A MIN. OF 10 FOOT CANDLES (108 LUX) OF LIGHT, MEASURED 30" OFF THE FLOOR TO BE PROVIDED IN ALL FOOD AND UTENSIL STORAGE ROOMS, TOILET, AND DRESSING ROOMS.
8. A MIN. OF 20 FOOT CANDLES (215 LUX) OF LIGHT, MEASURED 30" OFF THE FLOOR TO BE PROVIDED IN ALL AREAS DURING GENERAL CLEANUP ACTIVITIES.
9. ALL SHELVING OVER WET AREAS (SINKS, MOP SINKS, ETC.) WILL BE STAINLESS STEEL.
10. SHATTER SHIELDS OR SHATTERPROOF LIGHT BULBS TO BE PROVIDED FOR ALL LIGHTS ABOVE FOOD PREPARATION, WORK, AND STORAGE AREAS.
11. ALL PLUMBING, ELECTRICAL, AND GAS LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT AN EXTENT AS POSSIBLE.
12. FLOOR SINKS UNDER EQUIPMENT MUST BE 50% EXPOSED AND EASILY ACCESSIBLE FOR CLEANING AND SERVICING.
13. ALL EXHAUST HOODS TO BE A MIN. 22 GA. STAINLESS STEEL, U.L. LISTED, AND CONSTRUCTED AND INSTALLED TO ALL U.L. AND CSCB 101.1.1, & CSI'C 609.1 SPECIFICATIONS. EXHAUST DUCTS TO BE A MIN. 16 GA. STEEL. (TYPE 1 HOOD DUCTS TO HAVE WELDED SEAMS)
14. ALL FLOOR TILE TO BE SMOOTH UNDER ALL EQUIPMENT, AND WALKWAYS TO HAVE A LIGHT TEXTURE ONLY.
15. ALL 3-COMPARTMENT SINKS TO HAVE A MIN. COMPARTMENT SIZE OF 18" X 18" X 12" DEEP, WITH A MIN. 18" DRAIN BOARD ON EACH END. PROVIDE WITH 8" HIGH INTEGRAL BACK SPLASH AT ALL WALLS. (SEE FOOD SERVICE SPECIFICATIONS FOR SIZES OF EACH ITEM.)
16. SUPPORT ROOMS ARE FOR STORAGE AND UTENSIL WASHING ONLY. NO VEGETABLE WASHING OR FOOD PREP. TO BE DONE

FOOD SERVICE NOTES

1. REQUIREMENTS SHOWN ARE FOR ONE ITEM, TO DERIVE TOTAL MULTIPLY BY QUANTITY SHOWN.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE MAG. STARTERS, DISCONNECT SWITCHES, INTERLOCKS AND THERMO-OVERLOAD PROTECTION WHERE REQUIRED.
3. PLUMBING CONTRACTOR SHALL PROVIDE STOP VALVES AHEAD OF ALL OPERATING HANDLES AND FAUCETS.
4. SEE EQUIPMENT PLUMBING AND ELECTRICAL ROUGH-IN DRAWINGS FOR ADDITIONAL INFORMATION.
5. ELECTRICAL POWER TO COOKING EQUIPMENT, WHERE REQUIRED, SHALL BE PROVIDED THRU A SHUNT-TRIP SYSTEM FOR FIRE FUEL SHUT-OFF. ELECTRICAL CONTRACTOR SHALL WIRE CONTROL CIRCUIT TO MICRO SWITCH PROVIDED BY KITCHEN EQUIPMENT CONTRACTOR ON HOOD FIRE PROTECTION SYSTEM.
6. GAS SUPPLY TO ALL COOKING EQUIPMENT, WHERE REQUIRED, SHALL BE PROVIDED WITH AN ELECTRIC VALVE FOR FIRE-FUEL SHUT-OFF. VALVE TO BE SUPPLIED BY THE "K.E.C." AND INSTALLED BY THE "P.C." K.E.C. SHALL CONNECT VALVE TO THE HOOD FIRE PROTECTION SYSTEM FOR AUTOMATIC SHUT-OFF.
7. ALL WALK-IN BOX COILS REQUIRE CONNECTIONS TO SOLENOID VALVE, T-STAT, T-CLOCK AND MOTORS AND CONTROL WIRING TO THE REMOTE COMPRESSOR ALL CONNECTIONS TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
8. ALL WALK-IN BOX FIXTURES TO BE PROVIDED BY THE "K.E.C." INSTALLATION AND WIRING TO BE PROVIDED BY THE "E.C." WITH ALL CONDUIT RUN ON EXTERIOR (TOP) OF BOX.
9. VACUUM BREAKERS WHEN USED, TO BE MINIMUM OF SIX INCHES ABOVE THE FLOOD LEVEL RIM WITH NO SHUT OFF DEVICES BEYOND THE DISCHARGE OF THE VACUUM BREAKER.
10. WALL BACKING PROVIDED BY GENERAL CONTRACTOR.
11. PLUMBING CONTRACTOR TO SUPPLY GREASE TRAP AS REQUIRED BY CODE.
12. ALL COOKING EQUIPMENT UNDER EXHAUST HOODS ARE EITHER ON CASTERS WITH FLEXIBLE UTILITY QUICK DISCONNECTS OR FIXED ON S/S LEGS.
13. ALL NEW EXHAUST HOODS WILL BE CONSTRUCTED TO MEET THE FOLLOWING STANDARDS: NSF, UL AND NFPA-96. ALL NEW HOODS TO BEAR UL CLASSIFIED LABEL WITHOUT DAMPERS IN EXHAUST VENT COLLARS. HOODS ARE DESIGNED TO MEET OR EXCEED 50 FPM CAPTURE VELOCITY AT THE COOKING SURFACE EDGE AND HAVE A 6" MIN. OVERHANG AT ALL EXPOSED COOKING AREAS.
14. BACK SPLASHES OF EQUIPMENT SHALL BE SEALED TO WALLS WITH CLEAR SILICONE CAULK IN A NEAT WORKMAN LIKE MANNER.

SHEET NOTES

This plan represents a food service layout of culinary, beverage, systems and related equipment for the convenience of owner/operator, architects, mechanical, electrical, and plumbing engineers, contractors, kitchen equipment fabricators, kitchen equipment contractors and other related trades. The base plan has been made available from information provided by others, not limited to measurements, electronic backgrounds, grid lines and existing or proposed building systems, not limited to (plumbing, structural, concrete, ductwork, electrical and mechanical). General contractors, subcontractors, kitchen equipment dealers, contractors, installers, related and non-related contractors, are responsible for securing and obtaining their own measurements and specific information. Information indicated on these plans are generally for food service equipment and are intended as reference only. RJS Associates is not responsible for the engineering or integration of related engineering and disciplines throughout the full set of construction documents specific to the food service equipment in relation to the structural, architectural, mechanical, plumbing and electrical trades, unless otherwise specifically provided for in the plans and specifications. RJS Associates assumes no responsibility for work done by any and all architects, engineers, consultants or contractors, or for any changes made necessary by local, state, or national building codes, ordinances, structural conditions, or by the substitution or changes in equipment shown on this plan(s). Contractors are to make allowances for internal and external final connections on the food service equipment, waste piping, valves, back-flow prevention, traps, drain grates, fluid /gas regulators, faucets, steam traps, starting switches and motors, except where specifically noted in the food service specifications, section 11400.

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

△ 2/19/19 ADDENDUM 1

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

RJS + ASSOCIATES
INTEGRATED FOOD SERVICE DESIGN
P.O. BOX 370 / 4 HIGH STREET
MANCHESTER, CT 06040
T: 860.434.2700 F: 860.434.2725
www.rjsfsd.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-8164

TITLE
FOOD SERVICE EQUIPMENT
LIFE SAFETY & SPECIAL CONDITIONS PLAN

DATE 11/02/2018

DWG. NO.

FS-1.5.1

MPN Project Number:

OSCGR PROJECT NO. 132-0089 N • PHASE 2 OF 5
SITE AND BUILDING CONSTRUCTION
PHILIP R. SMITH ELEMENTARY SCHOOL
SOUTH WINDSOR, CONNECTICUT

ADDENDUM NUMBER TWO

February 21, 2019

The following Addendum Number Two forms a part of the Contract Documents and modifies the original specifications and drawings dated November 2, 2018, for Philip R. Smith Elementary School Phase 2 of 5: Site and Building Construction.

This Addendum Number Two consists of 6 pages, plus 34 sheets of attachments, totaling 40 sheets.

SPECIFICATIONS

Item 1

SECTION 03 30 00 CAST IN PLACE CONCRETE: At Article 3.10 Paragraph D **DELETE** subparagraph 3 and **REPLACE** with new subparagraph 3 to read as follows:

3. Flatness and Levelness of Concrete Slabs: Reference finish floor material Specifications for flatness and levelness requirements. Surface concrete slabs to the more restrictive requirements specified by finish floor material specifications or as follows:

    a. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch.
    b. FF30/FL20 for Resilient Floor Tile and Resilient Sheet Athletic Floor.
    c. Remainder FF25/FL20.

Item 2

SECTION 05 51 00 - METAL STAIRS AND RAILINGS: At Article 2.8 Paragraph D **DELETE** subparagraph 3 and **REPLACE** with new subparagraph 3 to read as follows:

A. Field-Painted Finish: Field apply finish coats in compliance with requirements of Division 9 Section "Painting."

Item 3

SECTION 07 27 26 - FLUID-APPLIED MEMBRANE AIR BARRIERS: At Article 2.1 Paragraph A subparagraph 1.a **ADD** new sub-subparagraph 4) to read as follows:

4) Meadows, W. R., Inc.; Air-Shield LSR.

Item 4

SECTION 07 42 43 COMPOSITE WALL PANELS: At Article 2.3 Paragraph B **DELETE** subparagraph 1 and **REPLACE** with new subparagraph 1 to read:

1. Panel Thickness: 0.157 inch (4 mm).

Item 5

SECTION 08 71 13 - AUTOMATIC DOOR OPERATORS: At Article 2.1 **DELETE** Paragraph A and associated subparagraphs and **REPLACE** with new Paragraph A and subparagraphs to read as follows:

A. Basis of Design: The basis of design manufacturer for automatic door operators specified in this Section is Stanley Access Technologies, Division of The Stanley Works. Subject to compliance with requirements, provide products of the named basis-of-design manufacturer or comparable products manufactured by one of the following:

1. Besam Automated Entrance Systems, Inc.
2. DORMA Architectural Hardware.
3. Dor-O-Matic, Inc.; an Ingersoll-Rand Company.
4. EFCO Corporation.
5. Horton Automatics.
6. KM Systems, Inc.
7. LCN Closers; an Ingersoll-Rand Company.
8. Nabco Entrances Inc.

Item 6

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

a. At Article 2.5 **DELETE** Paragraph B and **REPLACE** with new Paragraph B to read:

B. Gypsum Wallboard: Moisture- and Mold-Resistant Gypsum Wallboard, Type X, with the exception of the lower portion of walls, from floor to 4' AFF, within the following rooms which are to be Abuse-, Moisture-, and Mold-Resistant Gypsum Wallboard Type X: Custodial Storage, Janitor, and Cafeteria.

b. At Article 2.5 Paragraph B **DELETE** subparagraph 1 and **REPLACE** with new subparagraph 1 to read:

1. Moisture- and Mold- Resistant Gypsum Wallboard, Type X: ASTM C 1396/C 1396M for general use and areas where moisture- and mold- resistance is required including rooms subject to incidental moisture exposure; not for use where there will be direct exposure to water or continuous high humidity, or as substrate for ceramic tile; maximum flame spread of 25 and maximum smoke developed of 450 when tested in accordance with ASTM E84; and with moisture- and mold-resistant core and faces.

c. At Article 2.5 Paragraph B **DELETE** subparagraph 2 and **REPLACE** with new subparagraph 2 to read:

2. Abuse-, Moisture- and Mold-Resistant Gypsum Wallboard, Type X: ASTM C 1396/C1396M: ASTM C 1396/C 1396M for general use and areas where moisture- and mold- resistance is required including rooms subject to incidental moisture exposure; not for use where there will be direct exposure to water or continuous high humidity, or

as substrate for ceramic tile; maximum flame spread of 25 and maximum smoke developed of 450 when tested in accordance with ASTM E84; with moisture- and mold-resistant core and faces, and resistant to abrasion, indentation, and soft- and hard-body impact as specified.

Item 7

SECTION 09 51 13 - ACOUSTICAL PANEL CEILINGS:

a. At Article 2.5, **DELETE** Paragraph A and Paragraph B, and **REPLACE** with new Paragraphs A and B to read as follows:

A. Basis of Design Product: The basis of design product for ceiling suspension system is Armstrong World Industries, Inc.; Prelude ML.
B. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet, prepainted, hot-dip galvanized according to ASTM A 653/A 653M, not less than G30 coating designation, with prefinished 15/16-inch- wide metal caps on flanges.

1. Structural Classification: Medium-duty system.
2. End Condition of Cross Runners: Override (stepped) type.
3. Face Design: Flat, flush.
4. Cap Material: Steel cold-rolled sheet.
5. Cap Finish: Painted in color as selected from manufacturer's full range.

b. At Article 2.7 Paragraph B, **DELETE** subparagraph 1 in its entirety without substitution.

Item 8

SECTION 09 65 66 - RESILIENT SHEET ATHLETIC FLOORING: At Article 2.1 RESILIENT SHEET ATHLETIC FLOORING RSF-1, 2, Paragraph A **ADD** new subparagraph 3 to read as follows:

1. Tarkett Sports Division of Tarkett, Inc.; Omnisports 7.1 mm.

Item 9

SECTION 10 90 00 - SPECIALTIES

a. At Article 1.2 Paragraph A **DELETE** subparagraph 2 without substitution.

b. **DELETE** Article 2.2 PUSHBUTTON COVER in its entirety without substitution.

Item 10

SECTION 23 05 23 –GENERAL DUTY VALVES FOR HVAC PIPING: **REMOVE** Section 23 05 23 –GENERAL DUTY VALVES FOR HVAC PIPING from the specifications and **REPLACE** with Section 23 05 23 –GENERAL DUTY VALVES FOR HVAC PIPING consisting of 6 pages attached to and reissued with this Addendum.

Item 11

SECTION 23 21 13 - HYDRONIC PIPING: **REMOVE** Section 23 21 13 - HYDRONIC PIPING from the specifications and **REPLACE** with Section 23 21 13 - HYDRONIC PIPING consisting of 10 pages attached to and reissued with this Addendum.

Item 12

SECTION 28 20 00 VIDEO SURVEILLANCE: At Article 2.07 VIDEO SURVEILLANCE SYSTEM (CCTV) PRODUCT MANUFACTURERS Paragraph A **DELETE** subparagraph 2 that reads "Or approved equal."

Item 13

SECTION 28 13 33 AUDIO-VIDEO INTERCOM: At Article 2.3 AIPHONE EXTERIOR DOOR ACCESS, INTERCOM AND VIDEO CONTROL SYSTEM Paragraph B, **ADD** new subparagraph 2 to read as follows:

2. Any SIP 2.0 VoIP Telephone System compatible with this Intercom System shall interface any (VES) Door Station to VoIP Telephone Instruments

DRAWINGS

Item 14

DRAWING C2.1 – SITE PLAN ENLARGEMENT - SOUTH: **REMOVE** Drawing C2.1 – SITE PLAN ENLARGEMENT - SOUTH dated February 5, 2019 issued for bids and **REPLACE** with Drawing C2.1 – SITE PLAN ENLARGEMENT - SOUTH revised February 15, 2019 attached herewith and reissued with this Addendum.

Item 15

DRAWING A0.3 - INTERIOR ASSEMBLIES: All Gypsum board to be Moisture- and Mold-Resistant Gypsum Wallboard, Type X, with the exception of the lower portion of walls, from floor to 4' AFF, within the following rooms which are to be Abuse-, Moisture-, and Mold-Resistant Gypsum Wallboard Type X: Custodial Storage, Janitor, and Cafeteria

Item 16

MULTIPLE CEILING PLANS: Rooms 101C, 102A, 112, 203 and 204 to receive ACT-1. Rooms 117E, 210 and 220 to receive a GWB ceiling.

Item 17

DRAWING A5.6 – EXTERIOR DETAILS: Refer to revised Detail 9/A5.6. **REMOVE** Drawing A5.6 – EXTERIOR DETAILS dated February 5, 2019 issued for bids and **REPLACE** with Drawing A5.6 – EXTERIOR DETAILS revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 18

DRAWING A11.2 - PARTIAL FIRST FLOOR CEILING PLAN - WEST: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing A11.2 - PARTIAL FIRST FLOOR CEILING PLAN - WEST dated February 5, 2019 issued for bids and **REPLACE** with Drawing A11.2 - PARTIAL FIRST FLOOR CEILING PLAN - WEST revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 19

REISSUE Sheet AF1.0 INTERIOR FINISH SCHEDULE

Item 20

DRAWING M1.1 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - NORTH AND SOUTH: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M1.1 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - NORTH AND SOUTH dated February 5, 2019 issued for bids and **REPLACE** with Drawing M1.1 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - NORTH AND SOUTH revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 21

DRAWING M1.2 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - WEST: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M1.2 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - WEST dated February 5, 2019 issued for bids and **REPLACE** with Drawing M1.2 - MECHANICAL DUCTWORK FIRST FLOOR PLAN - WEST revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 22

DRAWING M1.3 - MECHANICAL DUCTWORK SECOND FLOOR PLAN - NORTH AND WEST: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M1.3 - MECHANICAL DUCTWORK SECOND FLOOR PLAN - NORTH AND WEST dated February 5, 2019 issued for bids and **REPLACE** with Drawing M1.3 - MECHANICAL DUCTWORK SECOND FLOOR PLAN - NORTH AND WEST revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 23

DRAWING M2.1 - MECHANICAL PIPING FIRST FLOOR PLAN - NORTH AND SOUTH: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M2.1 - MECHANICAL PIPING FIRST FLOOR PLAN - NORTH AND SOUTH dated February 5, 2019 issued for bids and **REPLACE** with Drawing M2.1 - MECHANICAL PIPING FIRST FLOOR PLAN - NORTH AND SOUTH revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 24

DRAWING M2.2 - MECHANICAL PIPING FIRST FLOOR PLAN - WEST: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M2.2 - MECHANICAL PIPING FIRST FLOOR PLAN -

WEST dated February 5, 2019 issued for bids and **REPLACE** with Drawing M2.2 - MECHANICAL PIPING FIRST FLOOR PLAN - WEST revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 25

DRAWING M2.3 - MECHANICAL PIPING SECOND FLOOR PLAN - NORTH AND SOUTH: Refer to revised detail on Sht. A11.2. **REMOVE** Drawing M2.3 - MECHANICAL PIPING SECOND FLOOR PLAN - NORTH AND SOUTH dated February 5, 2019 issued for bids and **REPLACE** with Drawing M2.3 - MECHANICAL PIPING SECOND FLOOR PLAN - NORTH AND SOUTH revised February 22, 2019 attached herewith and reissued with this Addendum.

Item 26

T100A - GENERAL SHEET TECHNOLOGY: ACCESS CONTROL Note 7, **DELETE** "100 Key Fobs".

CONTRACTOR RFI'S

Item 27

CONTRACTOR RFI's: Refer to South Windsor School Master Bid RFI Log included as part of this Addendum.

Refer to Bid RFI Log referenced in Supplement #2.

END OF ADDENDUM NUMBER TWO

SECTION 23 21 13 - HYDRONIC PIPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

A. Hydronic system requirements.

B. Heating water piping, above grade.

C. Radiant heating piping system.

D. Pipe and pipe fittings for:
   1. Heating water piping system.
   2. Equipment drains and overflows.

E. Pipe hangers and supports.

F. Unions, flanges, mechanical couplings, and dielectric connections.

G. Valves:
   1. Globe or angle valves.
   2. Ball valves.
   3. Check valves.

1.3 RELATED REQUIREMENTS

A. Section 07 84 13 - Penetration Firestopping

B. Section 23 05 16 - Expansion Fittings and Loops for HVAC Piping.

C. Section 23 05 23 - General-Duty Valves for HVAC Piping.

D. Section 23 05 48 - Vibration and Seismic Controls for HVAC Piping and Equipment.

E. Section 23 05 53 - Identification for HVAC Piping and Equipment.

F. Section 23 07 19 - HVAC Piping Insulation.

G. Section 23 21 14 - Hydronic Specialties.

H. Section 23 25 00 - HVAC Water Treatment: Pipe cleaning.

I. Section 26 05 83 - Wiring Connections: Electrical characteristics and wiring connections.

1.4 REFERENCE STANDARDS

A. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Welding, Brazing, and Fusing Procedures; Welders; Brazers; and Welding, Brazing and Fusing Operators; 2017.

B. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).

C. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2012.

D. ASME B31.9 - Building Services Piping; 2014.

E. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005).

F. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2008 (ANSI/ASME B31.9).

G. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.

H. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2017.

I. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).

J. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2016.

K. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2016.

L. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers; 1992 (Reapproved 2014).

M. ASTM F876 - Standard Specification for Crosslinked Polyethylene (PEX) Tubing; 2015a.

N. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems; 2011a.

O. ASTM F2165 - Standard Specification for Flexible Preinsulated Piping.

P. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (with March 2016 Errata).

Q. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2009.

1.5 ADMINISTRATIVE REQUIREMENTS

A. MSS SP-69 - Pipe Hangers and Supports - Selection and Application; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2003.

B. MSS SP-89 - Pipe Hangers and Supports - Fabrication and Installation Practices; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2003.

C. International Mechanical Code - Section 305.4 - Piping Supports, 2015 Edition.

1.6 SUBMITTALS

A. See Section 01 33 00 - Submittial Procedures, for submittal procedures.

B. Product Data: Include data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.

C. Welders Certificate: Include welders certification of compliance with ASME BPVC-IX.

D. Product Data:
1. Include data on pipe materials, pipe fittings, valves, and accessories.
2. Provide manufacturers catalogue information.

E. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.

F. Project Record Documents: Record actual locations of valves.

G. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with minimum five years of experience.

C. Welder Qualifications: Certify in accordance with ASME BPVC-IX.
1. Provide certificate of compliance from authority having jurisdiction, indicating approval of welders.

1.8 REGULATORY REQUIREMENTS

A. Conform to ASME B31.9 code for installation of piping system.

B. Welding Materials and Procedures: Conform to ASME (BPV IX) and applicable state labor regulations.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.10 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

PART 2 PRODUCTS

2.1 HYDRONIC SYSTEM REQUIREMENTS

A. Comply with ASME B31.9 and applicable federal, state, and local regulations.

B. Piping: Provide piping, fittings, hangers and supports as required, as indicated, and as follows:
1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
2. Use non-conducting dielectric connections whenever jointing dissimilar metals.
3. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.

C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use unions to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.

D. Valves: Provide valves where indicated:
1. Provide drain valves where indicated, and if not indicated provide at least at main shut-off, low points of piping, bases of vertical risers, and at equipment. Use 3/4 inch ball valves with cap; pipe to nearest floor drain.
2. For throttling, bypass, or manual flow control services, use ball valves.
3. For shut-off and to isolate parts of systems or vertical risers, use ball valves.

E. Welding Materials and Procedures: Conform to ASME BPVC-IX.

2.2 HEATING WATER PIPING, ABOVE GRADE

A. Steel Pipe (greater than 2 inch pipe size): ASTM A53/A53M, Schedule 40, black, using one of the following joint types:

1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1/D1.1M welded.
2. Threaded Joints: ASME B16.3, cast iron fittings.
3. Fittings: ASTM B 16.3, cast iron or ASTM A 234/A 234M, wrought steel welding type fittings.
4. Joints: Threaded, or AWS D1.1 welded.
   a. 2-1/2" and larger - welded.

B. Copper Tube (2" pipe size and smaller) : ASTM B 88 (ASTM B 88M), Type L (B), drawn.
1. Solder Joints: ASME B16.22 solder wrought copper fittings.
   a. Solder: ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
2. Mechanical Press Sealed Fittings: Double pressed type complying with ASME B16.22, utilizing EPDM, nontoxic synthetic rubber sealing elements.
   a. Manufacturers:
      1) Grinnell Products, a Tyco Business: www.grinnell.com.
      2) Viega LLC: www.viega.com.
      3) Substitutions: See Section 01 60 00 - Product Requirements.
3. Mechanical Joints: Copper press fittings as manufactured by Viega or Rigid Tool Co.
   a. Press fittings: Copper press fittings shall conform to the material and sizing requirements of ASME B16.18 or ASME B16.22. O-rings for copper press fittings shall be EPDM.

2.3 RADIANT HEATING PIPING

A. Polyethylene Pipe: ASTM F876 or ASTM F877, cross-linked polyethylene, 100 psig operating pressure at 180 degrees F.
1. Fittings: Brass and copper.
2. Joints: Mechanical compression fittings.

2.4 EQUIPMENT/CONDENSATE DRAINS AND OVERFLOWS

A. Copper Tube: ASTM B88 (ASTM B88M), Type M (C), drawn; using one of the following joint types:
1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22 solder wrought copper fittings; ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.

2.5 PIPE HANGERS AND SUPPORTS

A. Provide hangers and supports that comply with MSS SP-58.
1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.

B. Conform to ASME B31.9.

C. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Carbon steel, adjustable swivel, split ring.

D. Hangers for Hot Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.

E. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.

F. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.

G. Vertical Support: Steel riser clamp.

H. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

I. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

J. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.

K. Inserts: Malleable iron case of galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

2.6 UNIONS, FLANGES, MECHANICAL COUPLINGS, AND DIELECTRIC CONNECTIONS

A. Unions for Pipe 2 Inches and Less:
   1. Copper Pipe: Bronze, soldered joints.

B. Flanges for Pipe 2 Inches and Greater:
   1. Ferrous Piping: 150 psig forged steel, slip-on.
   2. Gaskets: 1/16 inch thick preformed neoprene.

C. Dielectric Connections:
   1. Waterways:
      a. Water impervious insulation barrier capable of limiting galvanic current to 1 percent of short circuit current in a corresponding bimetallic joint.
      b. Dry insulation barrier able to withstand 600 volt breakdown test.
      c. Construct of galvanized steel with threaded end connections to match connecting piping.
      d. Suitable for the required operating pressures and temperatures.
   2. Flanges:
      a. Dielectric flanges with same pressure ratings as standard flanges.
      b. Water impervious insulation barrier capable of limiting galvanic current to 1 percent of short circuit current in a corresponding bimetallic joint.
      c. Dry insulation barrier able to withstand 600 volt breakdown test.
      d. Construct of galvanized steel with threaded end connections to match connecting piping.
      e. Suitable for the required operating pressures and temperatures.

D. Dielectric Connections: Union or waterway fitting with water impervious isolation barrier and one galvanized or plated steel end and one copper tube end, end types to match pipe joint types used.

2.7 BALL VALVES

A. For information on ball valves see Section 23 05 23.

2.8 SWING CHECK VALVES

A. For information on check valves see Section 23 05 23.

PART 3 EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs.

B. Remove scale and dirt on inside and outside before assembly.

C. Prepare piping connections to equipment using jointing system specified.

D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

E. After completion, fill, clean, and treat systems. Refer to Section 23 25 00 for additional requirements.

3.2 ABOVE GROUND PIPING

A. Install in accordance with manufacturer's instructions.

B. Install heating water piping to ASME B31.9 requirements.

C. Route piping in orderly manner, parallel to building structure, and maintain gradient.

D. Install piping to conserve building space and to avoid interfere with use of space.

E. Group piping whenever practical at common elevations.

F. Sleeve pipe passing through partitions, walls and floors.

G. Slope piping and arrange to drain at low points.

H. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 23 05 16.
   1. Flexible couplings may be used in header piping to accommodate thermal growth, thermal contraction in lieu of expansion loops.

2. Use flexible couplings in expansion loops.

I. Inserts:
   1. Provide inserts for placement in concrete formwork.
   2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
   3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
   4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
   5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut above slab.

J. Pipe Hangers and Supports:
   1. Install in accordance with ASME B31.9, ASTM F708, or MSS SP-58.
   2. Support horizontal piping as scheduled.
   3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
   4. Place hangers within 12 inches of each horizontal elbow.
   5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
   6. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
   7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
   8. Provide copper plated hangers and supports for copper piping.
   9. Prime coat exposed steel hangers and supports. Refer to Section 09 91 23. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.

K. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings. Refer to Section 23 07 19.

L. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors with Section 08 31 00.

M. Use eccentric reducers to maintain top of pipe level.

N. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welds.

O. Prepare unfinished pipe, fittings, supports, and accessories, ready for finish painting. Refer to Section 09 91 23.

P. All piping supports shall be secured to the building structure.

Q. Install valves with stems upright or horizontal, not inverted. Ball valve operators shall allow for full range of operation.

R. Press Connections:
1. Copper press fittings shall be made in accordance with the manufacturers installation instructions.
2. The tubing shall be fully inserted into the fitting and the tube marked at the shoulder of the fitting.
3. The fitting alignment shall be checked against the mark on the tubing to assure the tubing is fully engaged (inserted) in the fitting.
4. The joints shall be pressed using the tool approved by the manufacturer.

3.3 FIELD QUALITY CONTROL

A. Prepare aboveground hydronic piping according to ASME B31.9.

B. Perform the following tests on aboveground hydronic piping:
1. Use ambient temperature water as a testing medium unless there is risk of damage due to freezing. Another liquid that is safe for workers and compatible with piping may be used.
2. While filling system, use vents installed at high points of system to release air. Use drains installed at low points for complete draining of test liquid.
3. Isolate expansion tanks and determine that hydronic system is full of water.
4. Subject piping system to hydrostatic test pressure that is not less than 1.5 times the system's working pressure, but not less than 100 psi. Test pressure shall not exceed maximum pressure for any vessel, pump, valve, or other component in system under test.
5. After hydrostatic test pressure has been applied for at least 15 minutes, examine piping, joints, and connections for leakage. Eliminate leaks by tightening, repairing, or replacing components, and repeat hydrostatic test until there are no leaks.
6. Prepare written report of testing.

C. Perform the following before operating the system:
1. Open manual valves fully.
2. Inspect pumps for proper rotation.
3. Set makeup pressure-reducing valves and adjust expansion tank pre-charge for required system pressure.
4. Inspect air vents at high points of system and determine if all are installed and operating freely (automatic type), or bleed air completely (manual type).
5. Verify lubrication of motors and bearings.

3.4 SCHEDULES

A. Hanger Spacing for Copper Tubing.
1. 1/2 inch and 3/4 inch: Maximum span, 5 feet; minimum rod size, 1/4 inch.
2. 1 inch: Maximum span, 6 feet; minimum rod size, 1/4 inch.
3. 1-1/2 inch and 2 inch: Maximum span, 8 feet; minimum rod size, 3/8 inch.

B. Hanger Spacing for Steel Piping.
   1. 2-1/2 inches: Maximum span, 11 feet; minimum rod size, 3/8 inch.
   2. 3 inches: Maximum span, 12 feet; minimum rod size, 3/8 inch.

END OF SECTION 23 21 13

SECTION 23 05 23 - GENERAL-DUTY VALVES FOR HVAC PIPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Applications.

B. General requirements.

C. Ball valves.

D. Check valves.

1.2 RELATED REQUIREMENTS

A. Section 07 84 00 - Firestopping.

B. Section 08 31 00 - Access Doors and Panels.

C. Section 23 05 48 - Vibration and Seismic Controls for HVAC Piping and Equipment.

D. Section 23 05 53 - Identification for HVAC Piping and Equipment.

E. Section 23 07 16 - HVAC Equipment Insulation.

F. Section 23 07 19 - HVAC Piping Insulation.

G. Section 23 21 13 - Hydronic Piping.

1.3 ABBREVIATIONS AND ACRONYMS

A. CWP: Cold working pressure.

B. EPDM: Ethylene propylene copolymer rubber.

C. NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.

D. PTFE: Polytetrafluoroethylene.

E. SWP: Steam working pressure.

F. TFE: Tetrafluoroethylene.

1.4 REFERENCE STANDARDS

A. ASME B1.20.1 - Pipe Threads, General Purpose (Inch); 2013.

B. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; 2015.

C. ASME B16.10 - Face-to-Face and End-to-End Dimensions of Valves; 2017.

D. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2012.

E. ASME B16.34 - Valves - Flanged, Threaded and Welding End; 2017.

F. ASME B31.9 - Building Services Piping; 2014.

G. ASTM A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings; 2004 (Reapproved 2014).

H. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings; 2017.

I. MSS SP-45 - Bypass and Drain Connections; 2003 (Reaffirmed 2008).

J. MSS SP-71 - Cast Iron Swing Check Valves, Flanged and Threaded Ends; 2011.

K. MSS SP-72 - Ball Valves with Flanged or Butt-Welding Ends for General Service; 2010.

L. MSS SP-80 - Bronze Gate, Globe, Angle and Check Valves; 2013.

M. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010.

1.5 SUBMITTALS

A. See Section 01 33 00 - Submittal Procedures for submittal procedures.

B. Product Data: Provide data on valves including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.

C. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Town of South Windsor's name and registered with manufacturer.

D. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts listings.

1.6 QUALITY ASSURANCE

A. Manufacturer:
   1. Obtain valves for each valve type from single manufacturer.
   2. Company must specialize in manufacturing products specified in this section, with not less than three years of documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Prepare valves for shipping as follows:

1. Minimize exposure of operable surfaces by setting plug and ball valves to open position.
2. Protect valve parts exposed to piped medium against rust and corrosion.
3. Protect valve piping connections such as grooves, weld ends, threads, and flange faces.
4. Secure check valves in either the closed position or open position.

B. Use the following precautions during storage:
1. Maintain valve end protection and protect flanges and specialties from dirt.
   a. Provide temporary inlet and outlet caps.
   b. Maintain caps in place until installation.
2. Store valves in shipping containers and maintain in place until installation.
   a. Store valves indoors in dry environment.
   b. Store valves off the ground in watertight enclosures when indoor storage is not an option.

C. Exercise the following precautions for handling:
1. Handle large valves with sling, modified to avoid damage to exposed parts.
2. Avoid the use of operating handles or stems as rigging or lifting points.

PART 2 PRODUCTS

2.1 APPLICATIONS

A. See Drawings for specific valve locations.

B. Provide the following valves for the applications if not indicated on Drawings:
1. Isolation (Shutoff): Ball.
2. Swing Check (Pump Outlet):
   a. 2 NPS and Smaller: Bronze with bronze disc.
   b. 2-1/2 NPS and Larger: Iron with lever and spring.

C. Substitutions of valves with higher CWP classes or SWP ratings for same valve types are permitted when specified CWP ratings or SWP classes are not available.

D. Required Valve End Connections for Non-Wafer Types:
1. Steel Pipe:
   a. 2-1/2 NPS and Larger: Flanged ends.
2. Copper Tube:
   a. 2 NPS and Smaller: Threaded ends (Exception: Solder-joint valve-ends).

E. Heating Hot Water Valves:
1. 2 NPS and Smaller, Bronze Valves:
   a. Threaded or soldered ends.
   b. Ball: Full port, two piece, brass trim.
   c. Swing Check: Bronze disc, Class 125.
2. 2-1/2 NPS and Larger, Iron Valves:
   a. 2-1/2 NPS to 4 NPS: Flanged ends.

b. Ball: 2-1/2 NPS to 10 NPS, Class 150.
c. Swing Check: Metal seats, Class 125.

2.2 GENERAL REQUIREMENTS

A. Valve Pressure and Temperature Ratings: No less than rating indicated; as required for system pressures and temperatures.

B. Valve Sizes: Match upstream piping unless otherwise indicated.

C. Valve Actuator Types:
1. Handwheel: Valves other than quarter-turn types.
2. Hand Lever: Quarter-turn valves 6 NPS and smaller.

D. Valves in Insulated Piping: Provide 2 NPS stem extensions and the following features:
1. Ball Valves: Extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation.

E. Memory Stops: Fully adjustable after insulation is installed.

F. Valve-End Connections:
1. Threaded End Valves: ASME B1.20.1.
2. Flanges on Iron Valves: ASME B16.1 for flanges on iron valves.
3. Solder Joint Connections: ASME B16.18.

G. General ASME Compliance:
1. Ferrous Valve Dimensions and Design Criteria: ASME B16.10 and ASME B16.34.
2. Building Services Piping Valves: ASME B31.9.

H. Bronze Valves:
1. Fabricate from dezincification resistant material.
2. Copper alloys containing more than 15 percent zinc are not permitted.

I. Valve Bypass and Drain Connections: MSS SP-45.

J. Source Limitations: Obtain each valve type from a single manufacturer.

2.3 BRONZE BALL VALVES

A. Two Piece, Full Port with Bronze or Brass Trim:
1. Comply with MSS SP-110.
2. SWP Rating: 150 psig.
3. CWP Rating: 600 psig.
4. Body: Bronze.
5. Ends: Threaded or soldered.

6. Seats: PTFE .
7. Ball: Chrome plated brass.

2.4 IRON BALL VALVES

A. Split Body, Full Port:
1. Comply with MSS SP-72.
2. CWP Rating: 200 psig.
3. Body: ASTM A126, gray iron.
4. Ends: Flanged.
5. Seats: PTFE.
6. Stem: Stainless steel.
7. Ball: Stainless steel.

2.5 BRONZE SWING CHECK VALVES

A. Class 125: CWP Rating: 200 psig (1380 kPa).
1. Comply with MSS SP-80, Type 3.
2. Body Design: Horizontal flow.
3. Body Material: Bronze, ASTM B62.
4. Ends: Threaded or soldered.
5. Disc: Bronze.

2.6 IRON, FLANGED END SWING CHECK VALVES

A. Class 125: CWP Rating: 200 psig (1380 kPa) with Metal Seats and Class 125: CWP Rating: 200 psig (1380 kPa) with Nonmetallic-to-Metal Seats.
1. Comply with MSS SP-71, Type I.
2. Design: Clear or full waterway with flanged ends.
3. Body: Gray iron with bolted bonnet in accordance with ASTM A126.
4. Trim: Bronze.
5. Disc Holder: Bronze.
6. Disc: PTFE or TFE.
7. Gasket: Asbestos free.

PART 3 EXECUTION

3.1 EXAMINATION

A. Discard all packing materials and verify that valve interior, including threads and flanges are completely clean without signs of damage or degradation that could result in leakage.

B. Verify valve parts to be fully operational in all positions from closed to fully open.

C. Confirm gasket material to be suitable for the service, to be of correct size, and without defects that could compromise effectiveness.

D. Should valve is determined to be defective, replace with new valve.

3.2 INSTALLATION

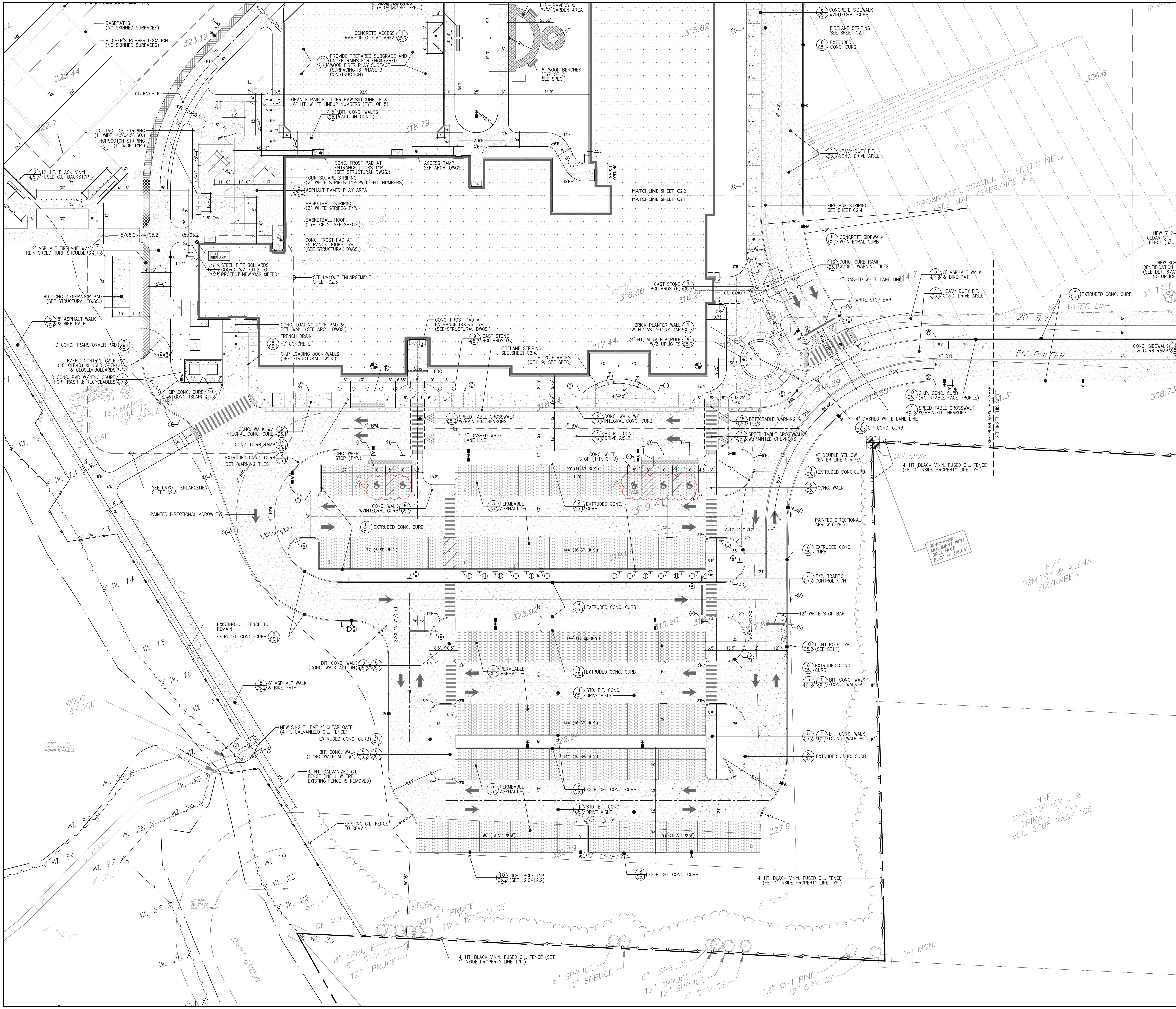
A. Provide unions or flanges with valves to facilitate equipment removal and maintenance while maintaining system operation and full accessibility for servicing.

B. Provide separate valve support as required and locate valve with stem at or above center of piping, maintaining unimpeded stem movement.

C. Where valve support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welds.

D. Install check valves where necessary to maintain direction of flow as follows:
   1. Swing Check: Install horizontal maintaining hinge pin level.

END OF SECTION 23 05 23



KEY TO SIGNAGE:

- A. "STOP"
- B. "NO PARKING FIRE LANE" (w/ARROWS LEFT & RIGHT)
- C. "NO PARKING FIRE LANE; STUDENT DROP-OFF ONLY" (w/ARROWS LEFT & RIGHT)
- D. "ACCESSIBLE PARKING"
- E. "ACCESSIBLE PARKING – VAN"
- F. "ADDITIONAL VISITOR PARKING" (w/ARROW RIGHT)
- G. "EXIT" (w/ARROW UP)
- H. "RESERVED CAR POOL PARKING"
- I. "RESERVED LOW EMISSION & FUEL EFFICIENT VEHICLE PARKING"
- J. "CLOSED DURING SCHOOL HOURS"
- K. "NO ENTRY BUSES ONLY"
- L. "DO NOT ENTER"
- M. "EXIT" (w/ARROW LEFT)
- N. "ONE WAY" (LEFT)
- O. "ONE WAY" (RIGHT)
- P. "LEFT TURN ONLY"
- Q. "SLOW PEDESTRIAN CROSSING"
- R. "ACCESSIBLE LOADING ZONE"
- S. "STUDENT DROP-OFF" (w/ARROW RIGHT) AND "VISITOR PARKING" (w/ARROW LEFT)"
- T. "NO ACCESS TO SCHOOL GROUNDS DURING SCHOOL HOURS"
- U. "VISITOR PARKING" (w/ARROW RIGHT)
- V. "VISITOR PARKING" (w/ARROW LEFT)
- W. "NO RIGHT TURN"
- X. "WE NEED YOU TO BUCKLE UP; SOUTH WINDSOR POLICE SERVICES"

BASE SURVEY PREPARED BY DESIGN PROFESSIONALS, INC. AUGUST 10, 2016

GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

MPN Project Number: 20172606.00

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/22/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

LRC GROUP
Land Planning | Civil Engineering | Landscape Architecture | Environmental Services | Land Survey

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE WETHERSFIELD, CT 06109 (860) 563-6164

TITLE
SITE PLAN ENLARGEMENT SOUTH

DATE 11/2/2018

DWG. NO.
C2.1

KEY TO SIGNAGE:

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K. "NO ENTRY BUSES ONLY"
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O. "ONE WAY" (RIGHT)
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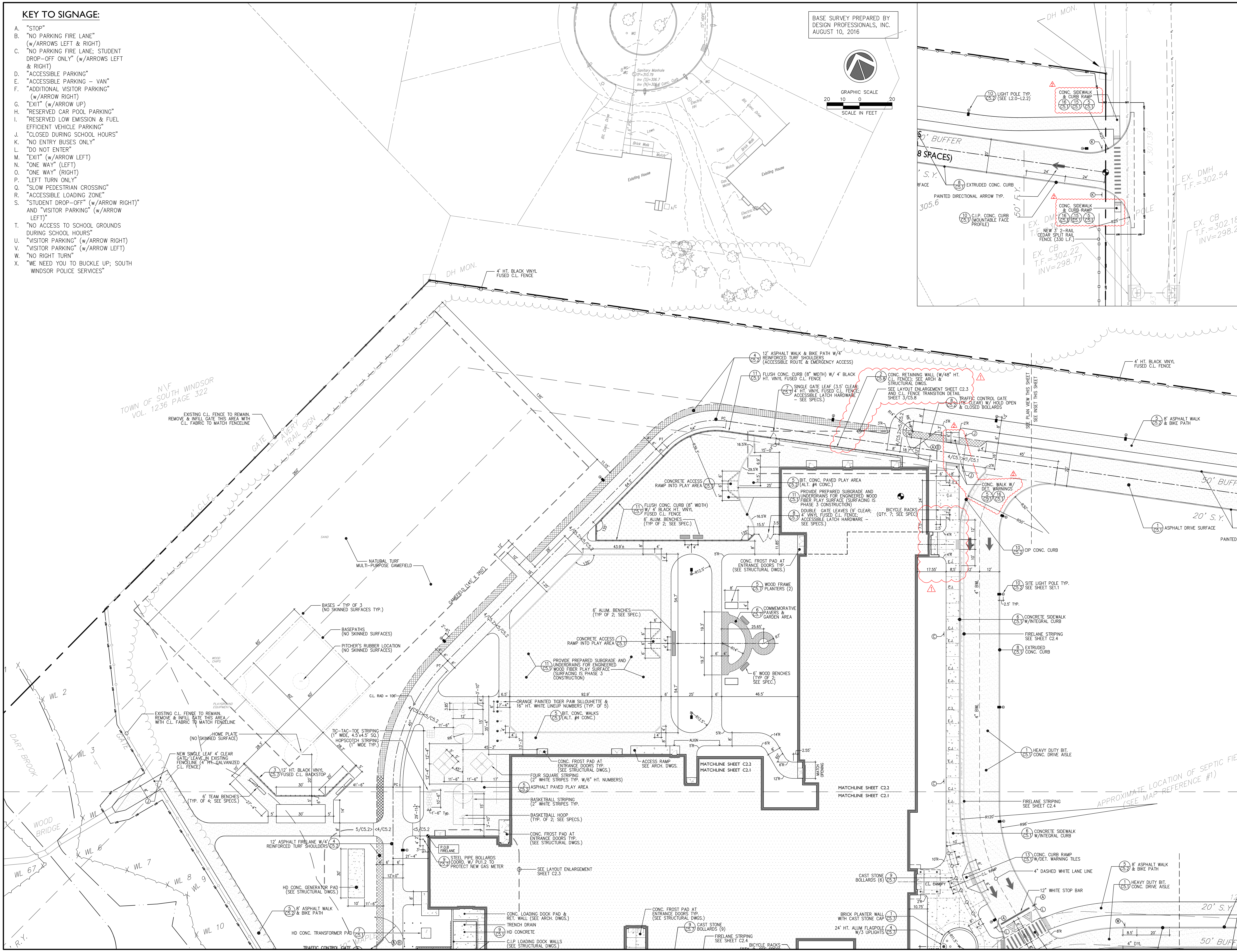
Q. "SLOW PEDESTRIAN CROSSING"
R. "ACCESSIBLE LOADING ZONE"
S. "STUDENT DROP-OFF" (w/ARROW RIGHT) AND "VISITOR PARKING" (w/ARROW LEFT)
T. "NO ACCESS TO SCHOOL GROUNDS DURING SCHOOL HOURS"
U. "VISITOR PARKING" (w/ARROW RIGHT)
V. "VISITOR PARKING" (w/ARROW LEFT)
W. "NO RIGHT TURN"
X. "WE NEED YOU TO BUCKLE UP; SOUTH WINDSOR POLICE SERVICES"



REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/22/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

LRC GROUP
160 West Street, Suite E, Cromwell, CT
Land Planning | Civil Engineering | Landscape Architecture | Environmental Services | Land Survey

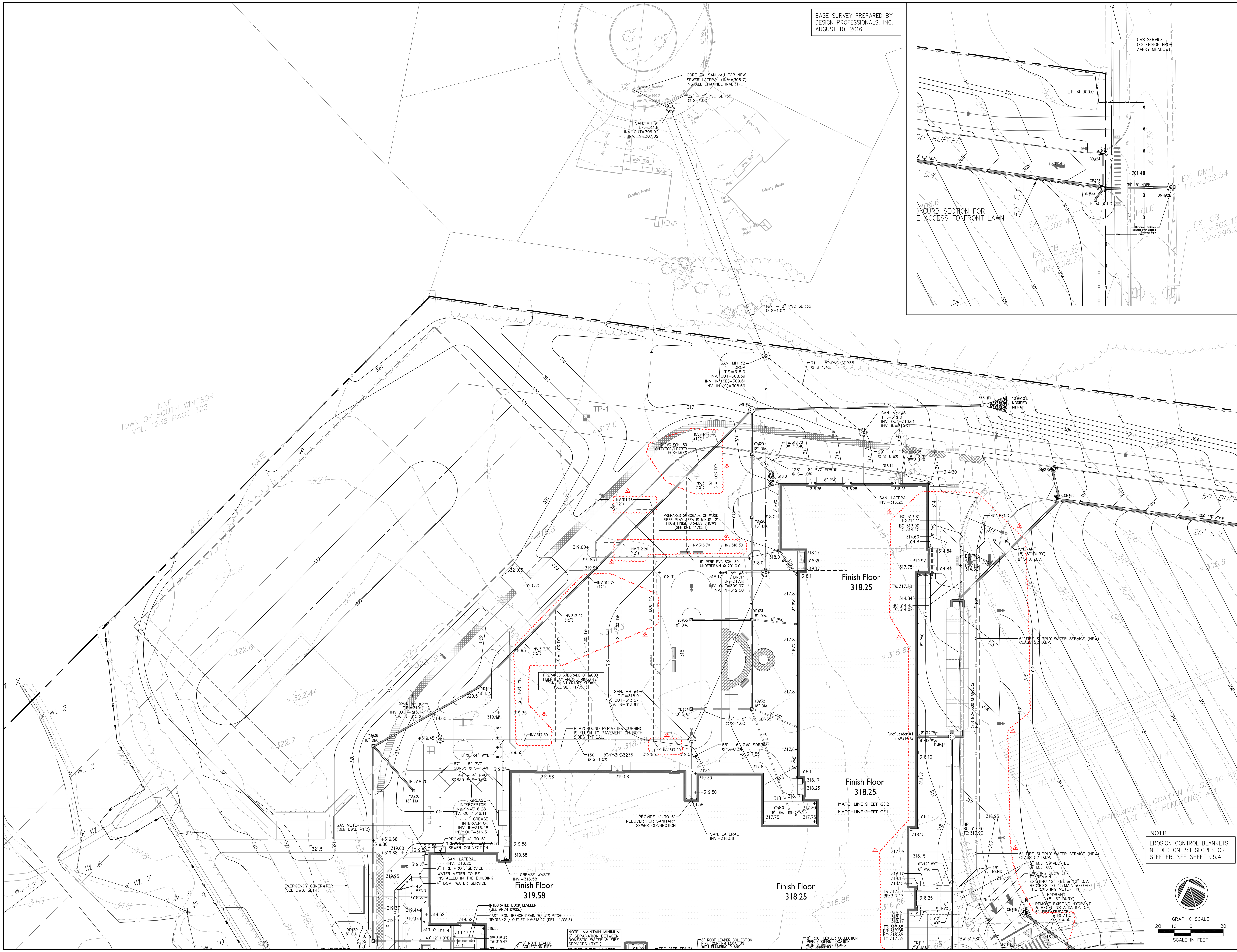
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE
SITE PLAN ENLARGEMENT NORTH

DATE 11/2/2018

DWG. NO.
C2.2

MPN Project Number: 20172126.00



NOTE:
EROSION CONTROL BLANKETS NEEDED ON 3:1 SLOPES OR STEEPER. SEE SHEET C5.4

GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019
1 2/19/19 ADDENDUM 1
2 2/22/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

LRC GROUP

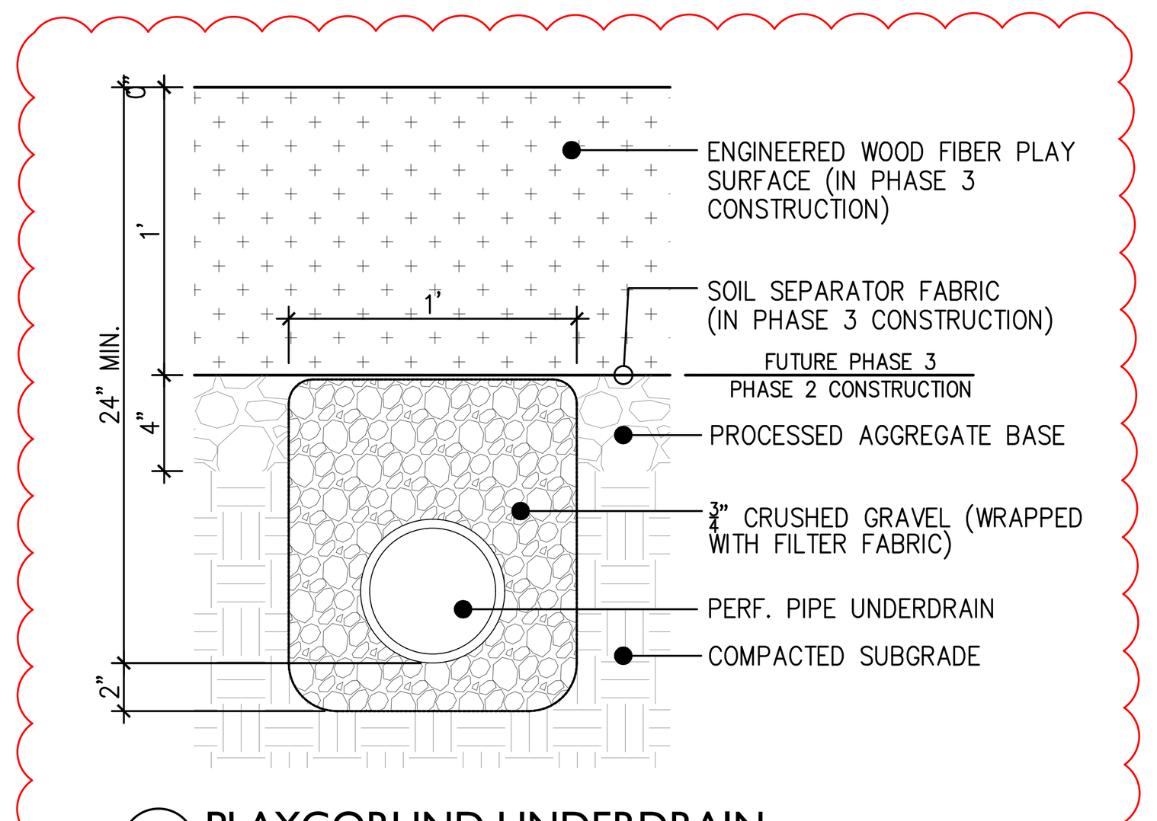
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE WETHERSFIELD, CT. 06109 (860) 563-6164

TITLE
GRADING & UTILITIES PLAN ENLARGEMENT NORTH

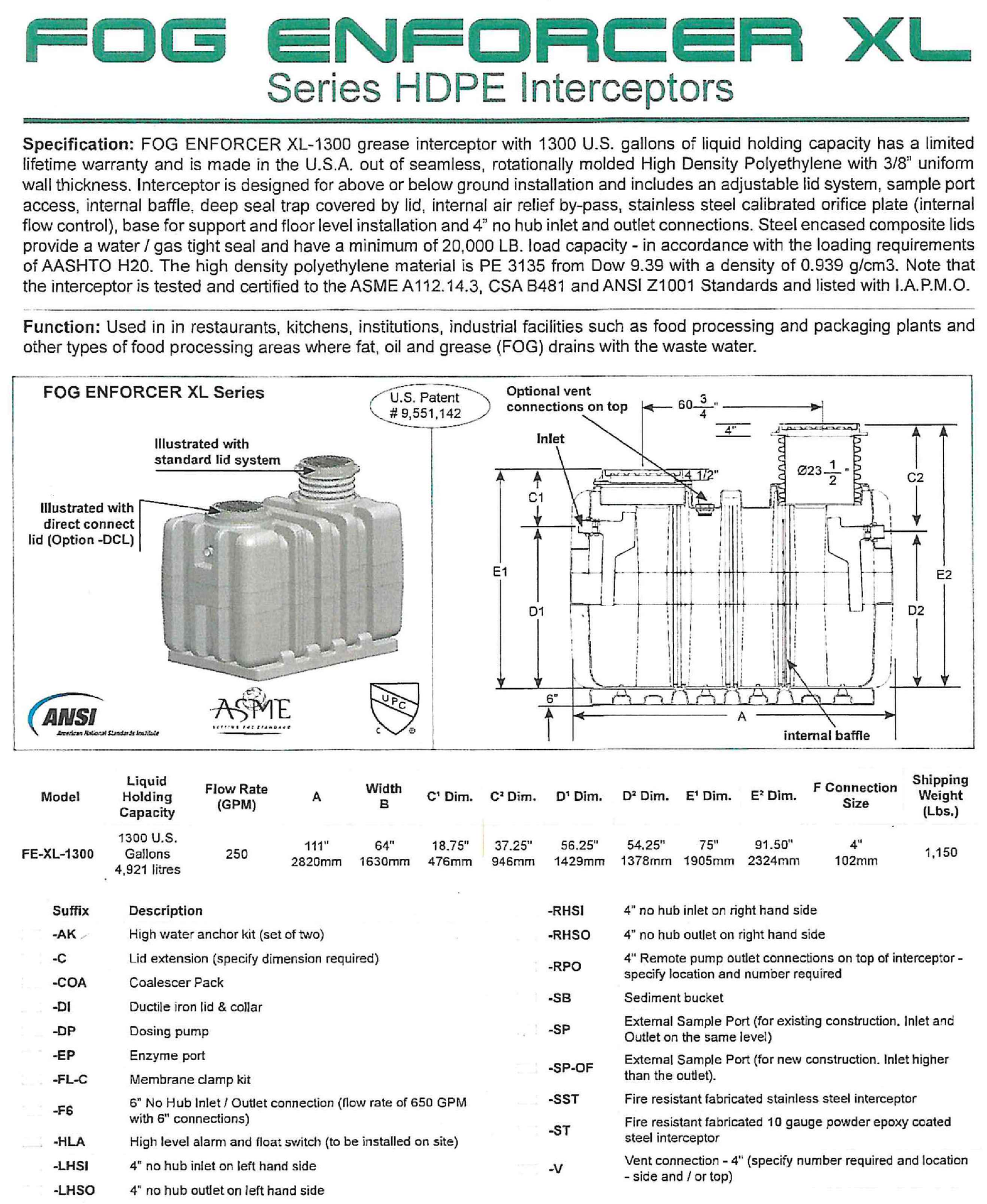
DATE 11/2/2018

DWG. NO.
C3.2

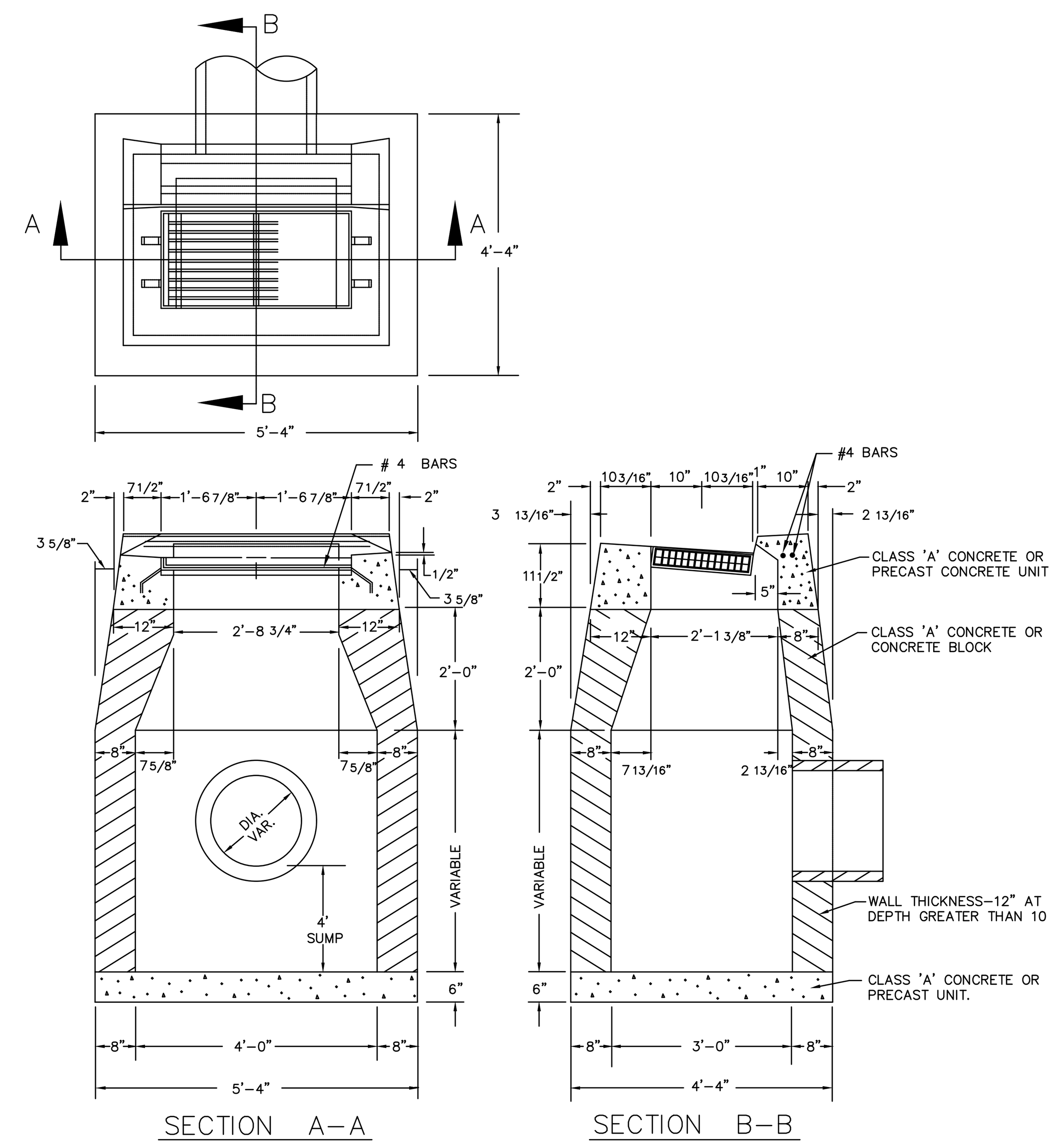
MPN Project Number: 201722600



13 PLAYGORUND UNDERDRAIN
SCALE: 1-1/2"=1'-0"

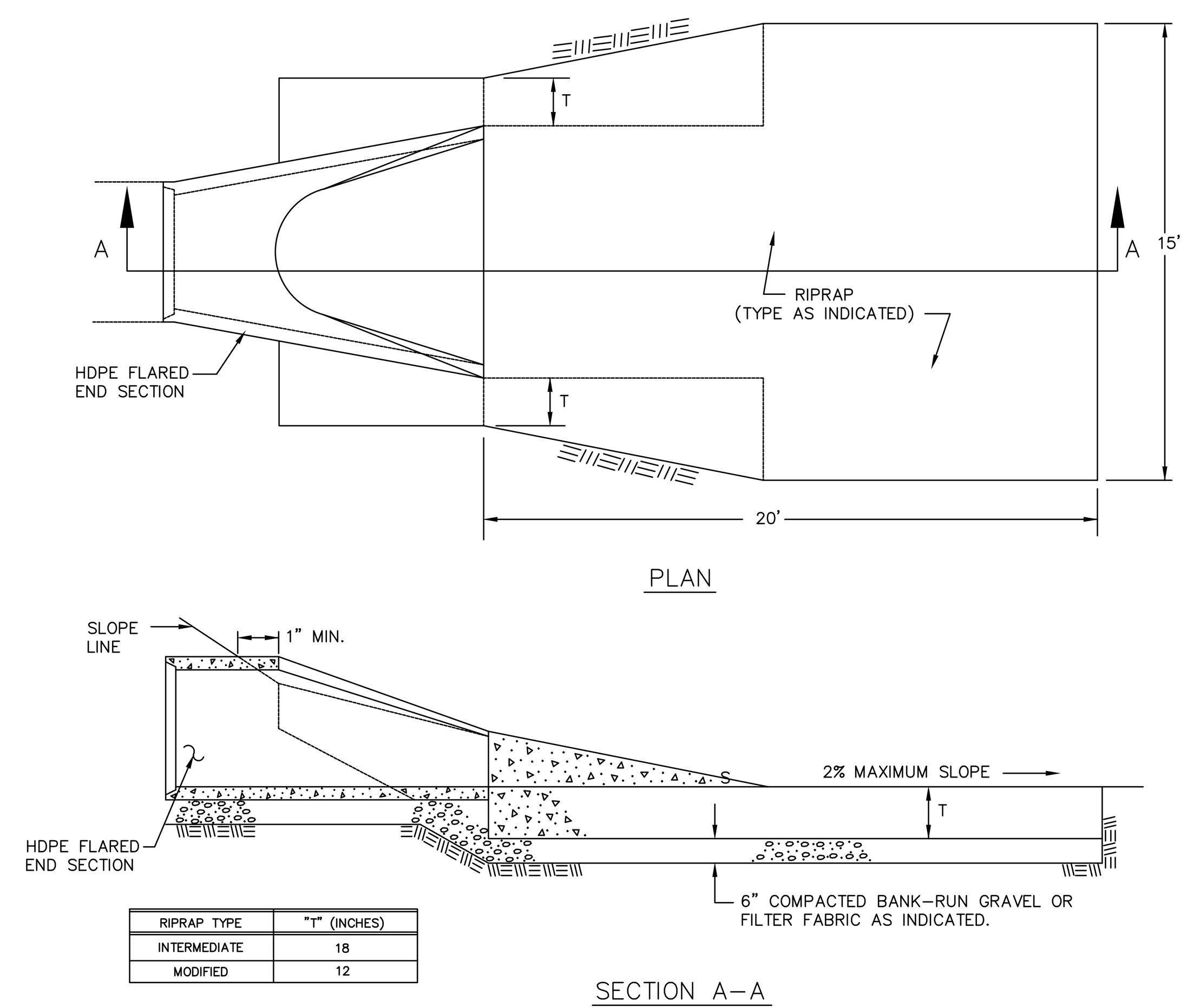


9 GREASE INTERCEPTOR
SCALE: NTS



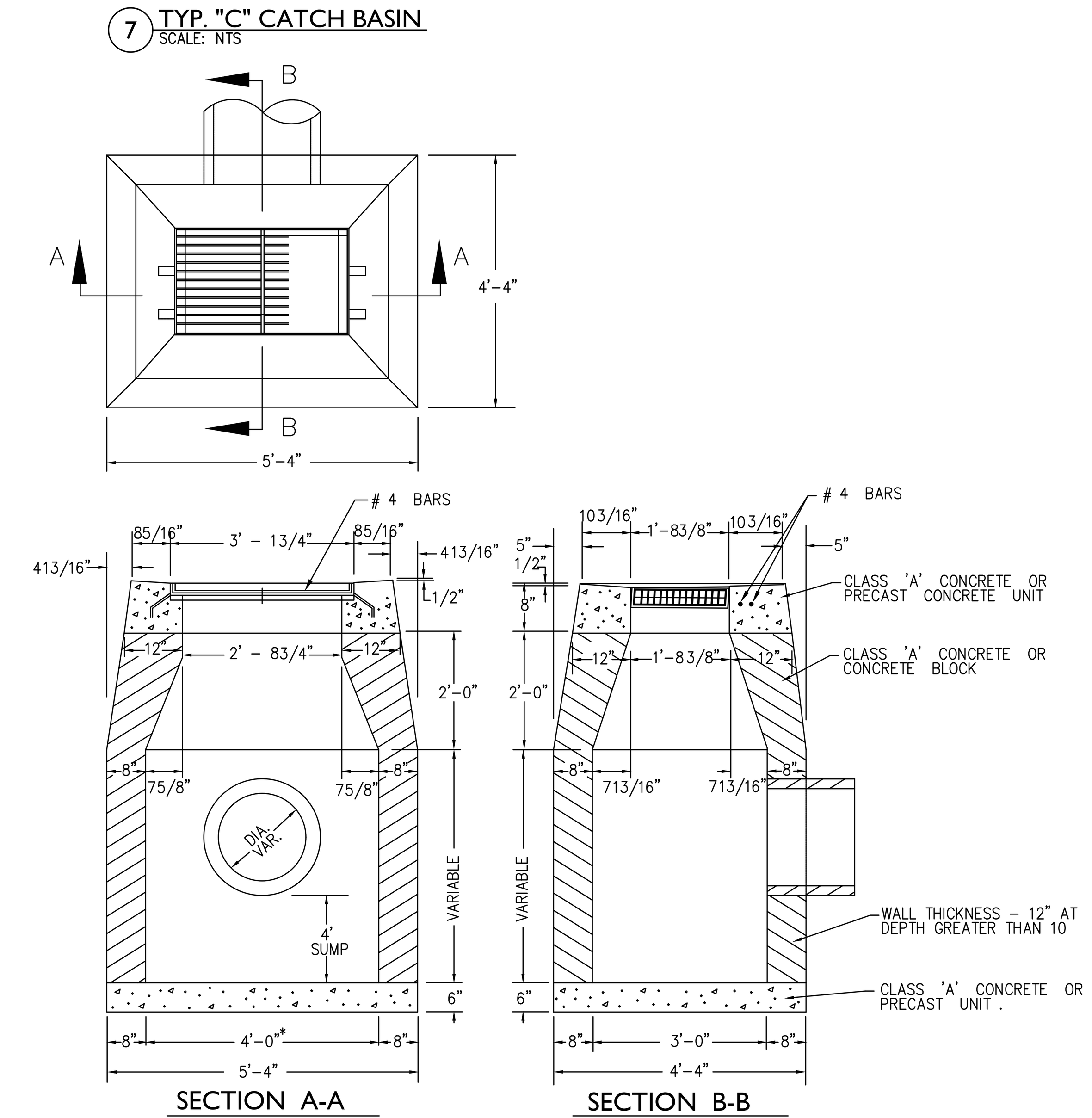
INSTALL TRAP HOOD ON ALL PROPOSED CATCH BASINS

7 TYP. "C" CATCH BASIN
SCALE: NTS



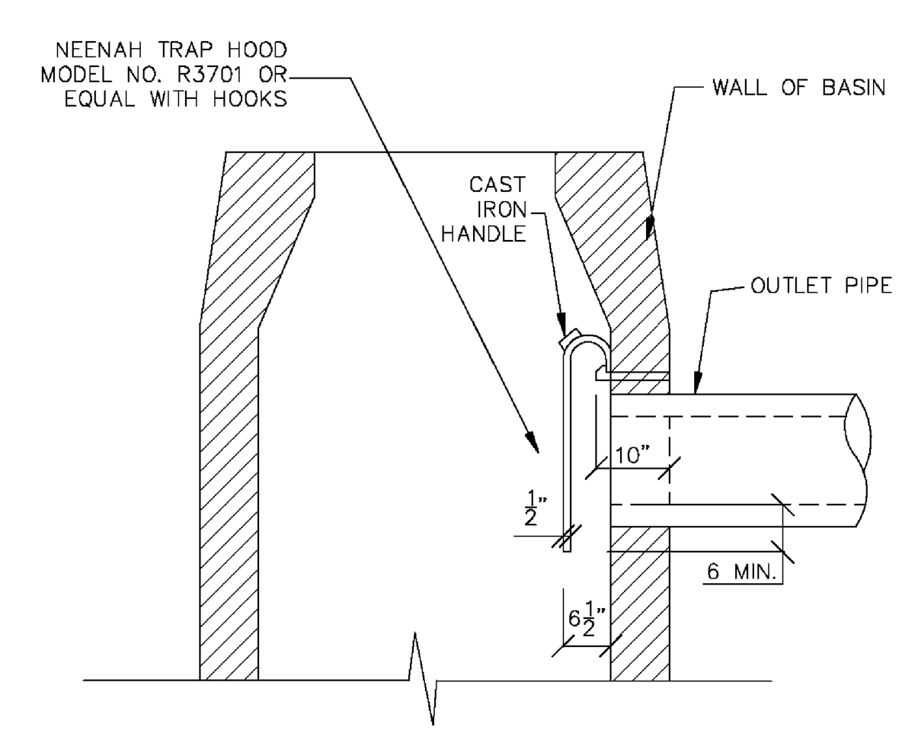
RIPRAP TYPE	"T" (INCHES)
INTERMEDIATE	18
MODIFIED	12

10 FLARED END W/ RIP RAP
SCALE: NTS



INSTALL TRAP HOOD ON ALL PROPOSED CATCH BASINS

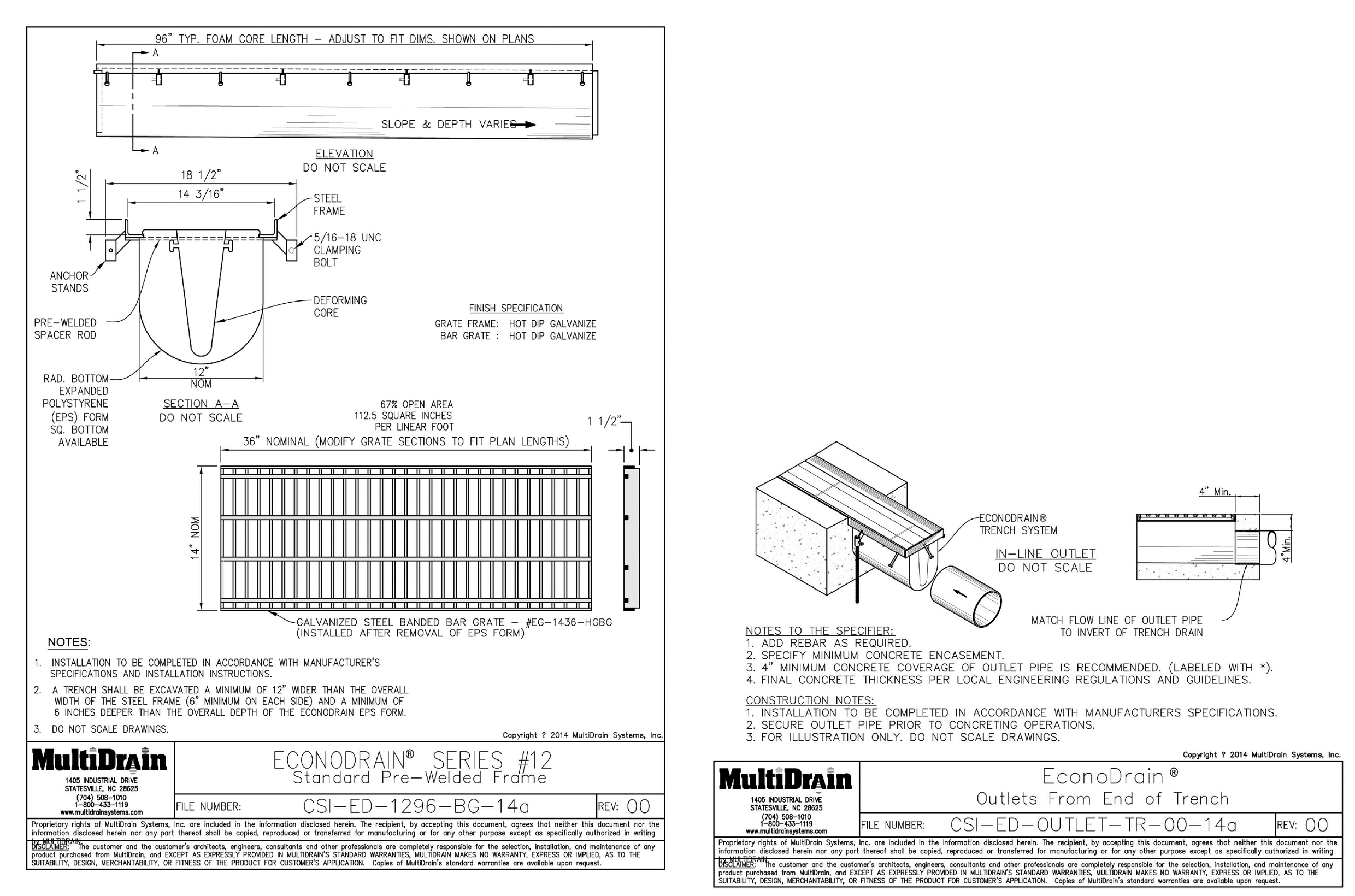
8 TYP. "C-L" CATCH BASIN
SCALE: NTS



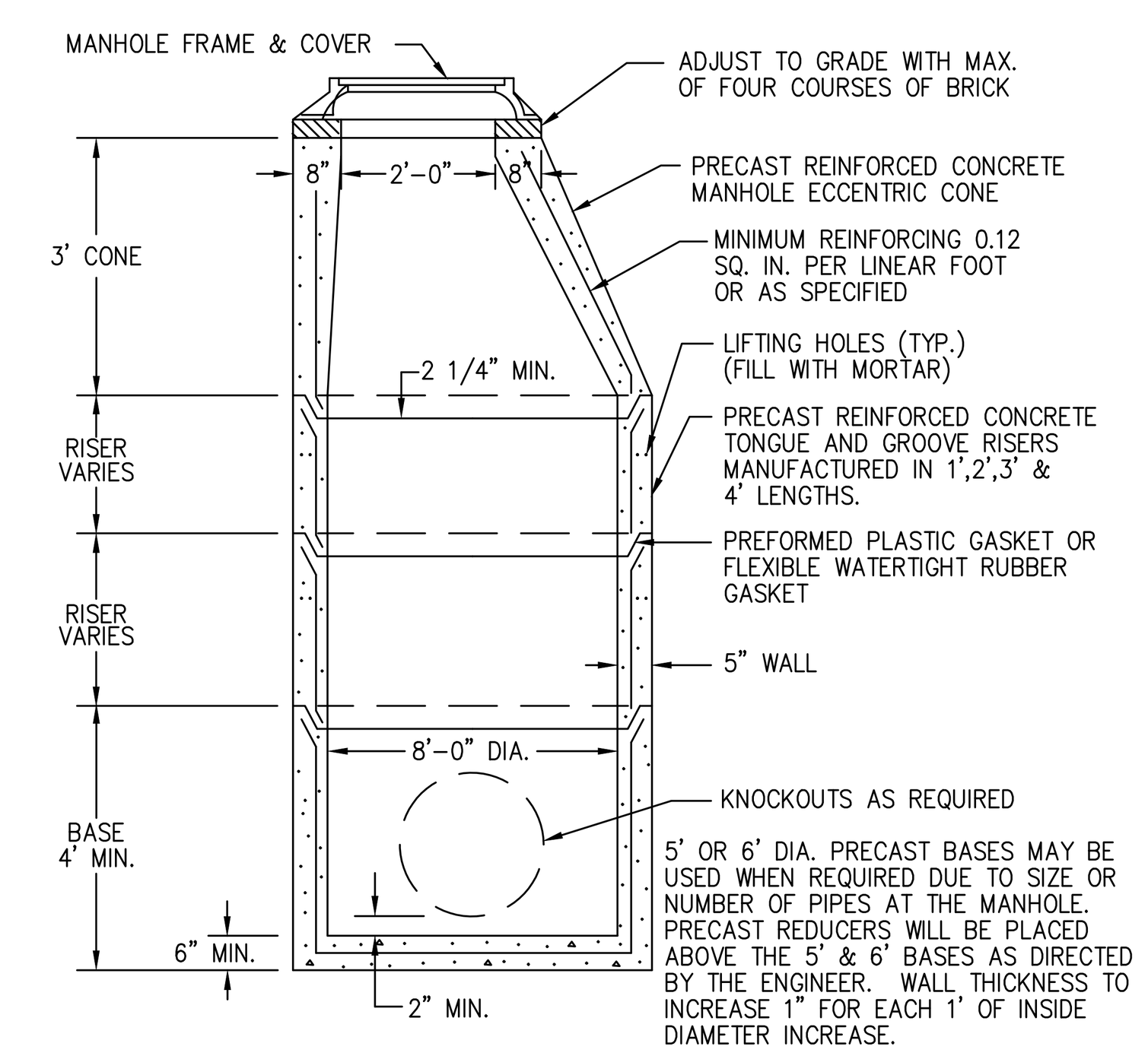
TRAP HOODS SHALL BE INSTALLED IN ALL CATCH BASINS, WHERE REQUIRED BY TOWN ENGINEER TO SATISFY ENVIRONMENTAL CONCERNS.

NOTE: TRAP HOODS MUST BE SIZED TO BE REMOVABLE FROM CB THROUGH GRATE OPENING FROM ABOVE.

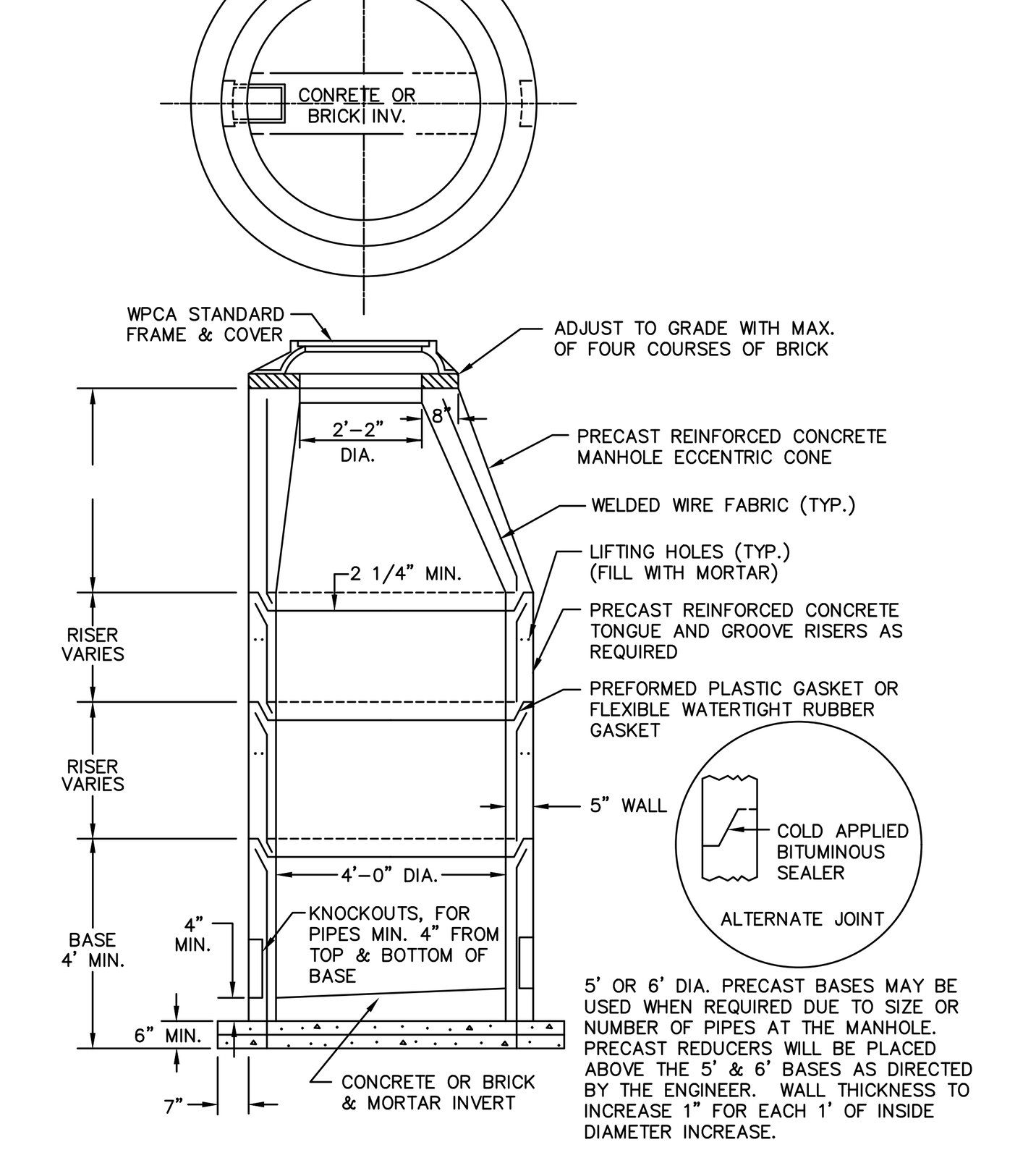
11 TRAP HOOD DETAIL
SCALE: NTS



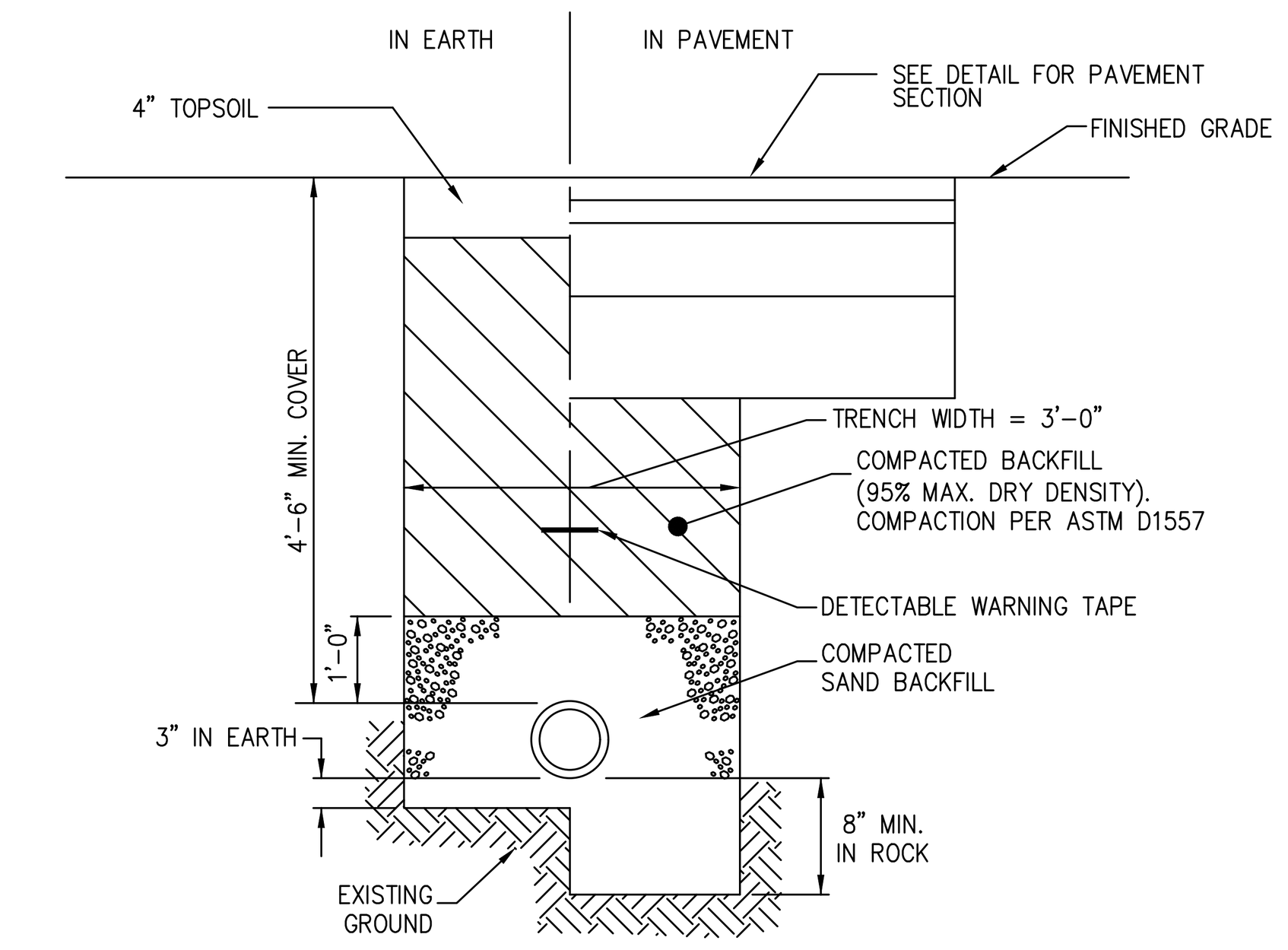
12 TRENCH DRAIN
SCALE: NTS



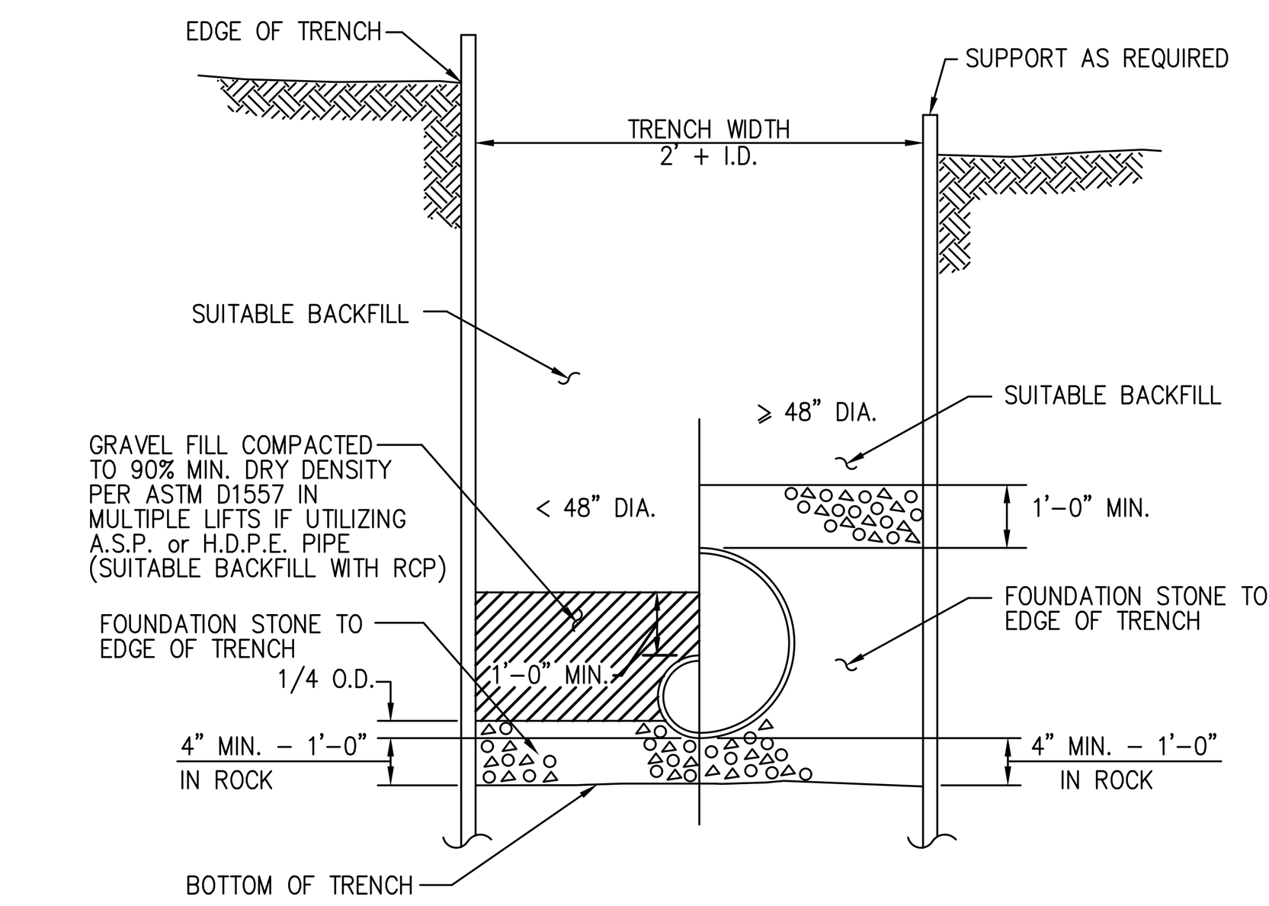
5 STORM DRAINAGE MANHOLE DETAIL
SCALE: NTS



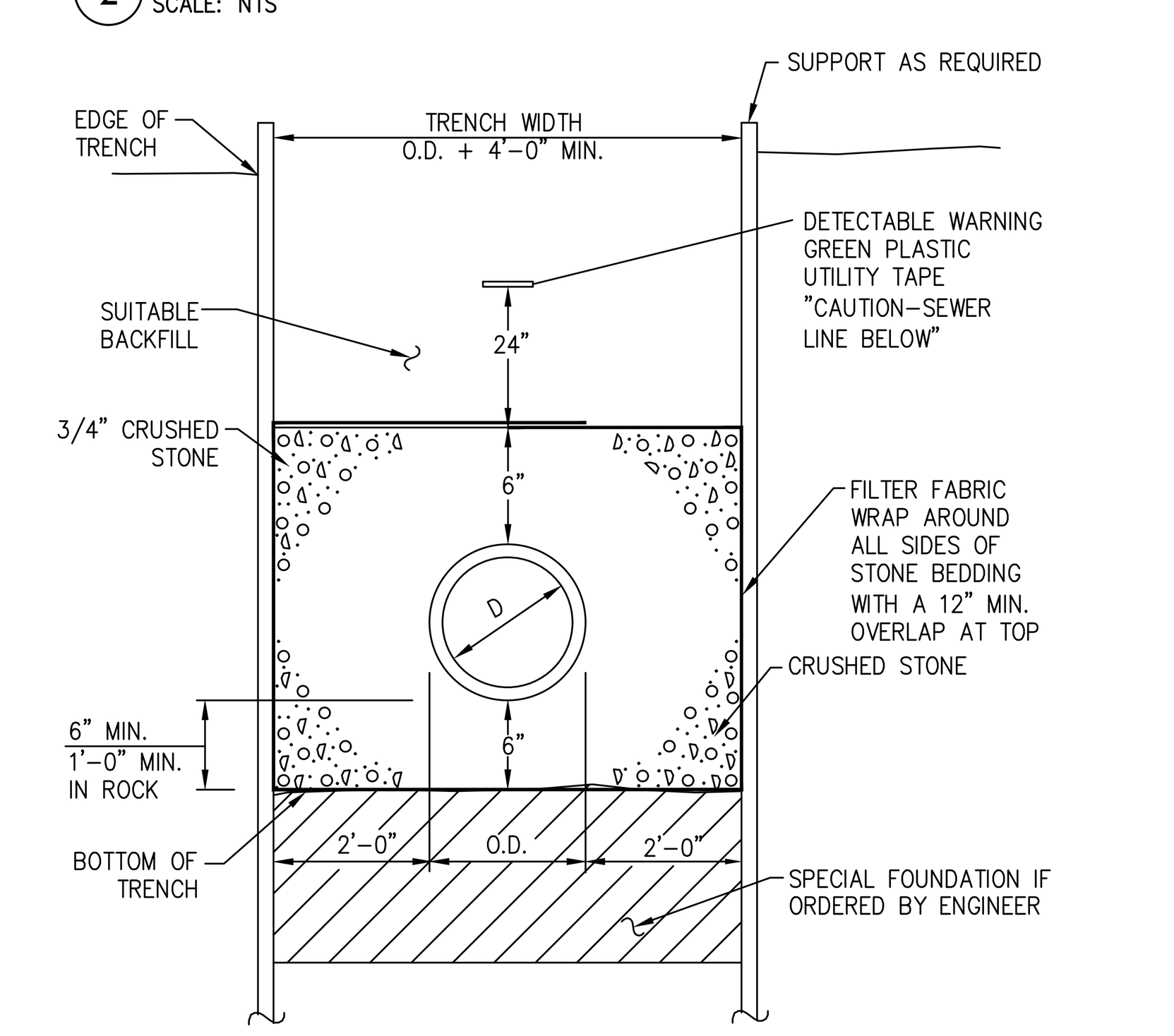
6 SANITARY SEWER MANHOLE DETAIL
SCALE: NTS



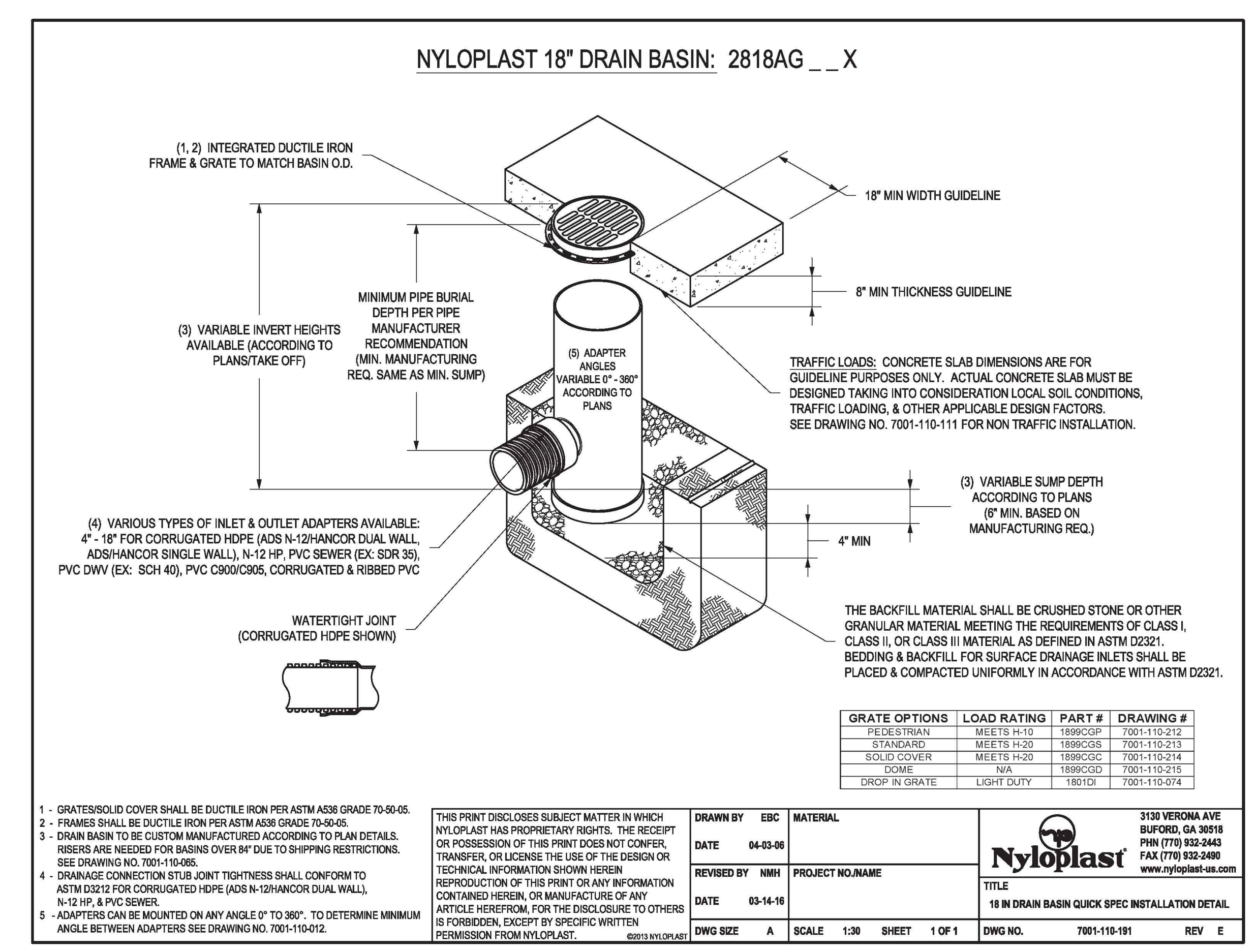
1 WATER MAIN & SERVICE TRENCH DETAIL
SCALE: NTS



2 TYP. STORMLINE TRENCH SECTION
SCALE: NTS



3 TYP. SANITARY SEWER LATERAL TRENCH SECTION
SCALE: NTS



4 AREA / LAWN / YARD DRAIN
SCALE: NTS

REVISIONS
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FEBRUARY 5, 2019
1 2/22/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
Phase 2 of 5

TOWN OF SOUTH WINDSOR
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Land Planning | Civil Engineering | Landscape Architecture | Environmental Services | Land Survey

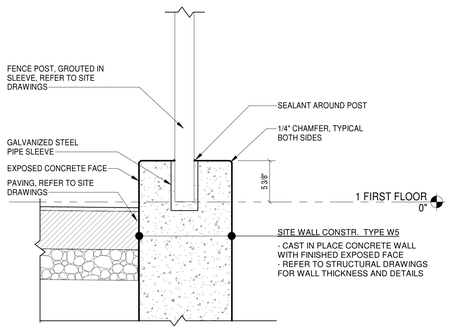
MOSER PILON NELSON
ARCHITECTS
30 JORDAN LANE
WETHERSFIELD CT 06109
(860) 563-6164

TITLE
SITE UTILITY DETAILS

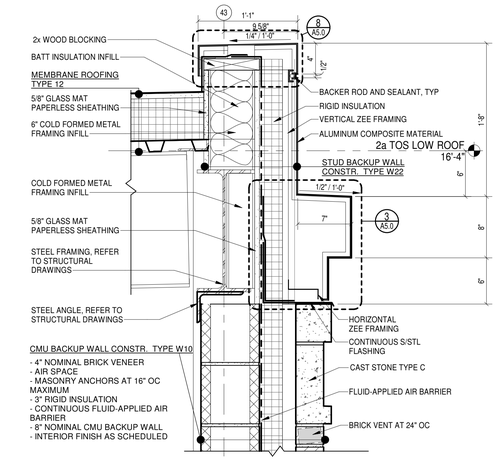
DATE 11/2/2018

DWG. NO.
C5.3

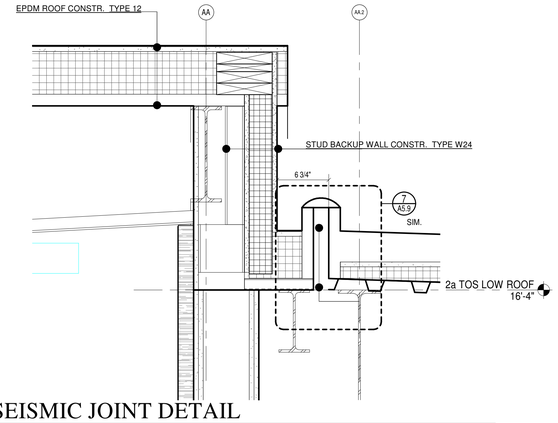
MPN Project Number: 2017226.00



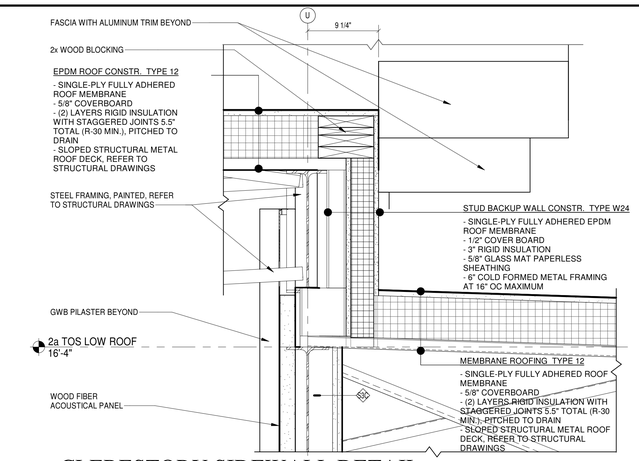
12 A5.6 SITEWALL DETAIL
1 1/2" = 1'-0"



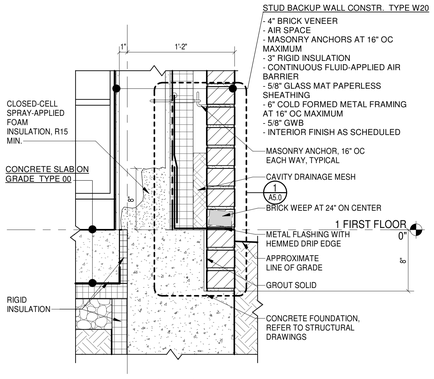
11 A5.6 CORNICE DETAIL
1 1/2" = 1'-0"



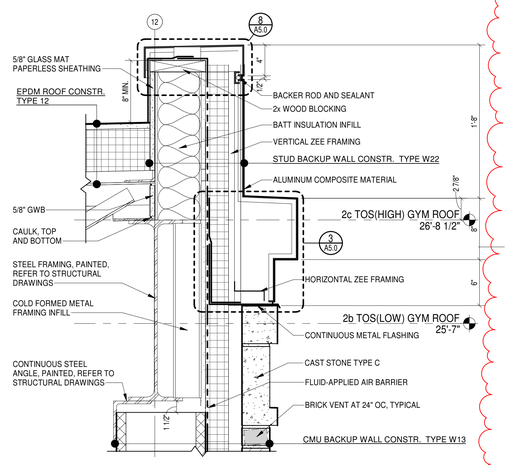
10 A5.6 SEISMIC JOINT DETAIL
1 1/2" = 1'-0"



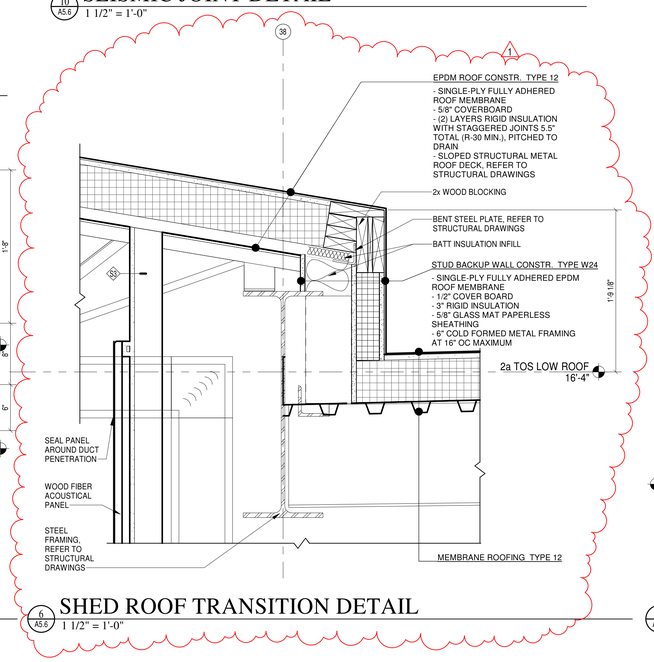
9 A5.6 CLERESTORY SIDEWALL DETAIL
1 1/2" = 1'-0"



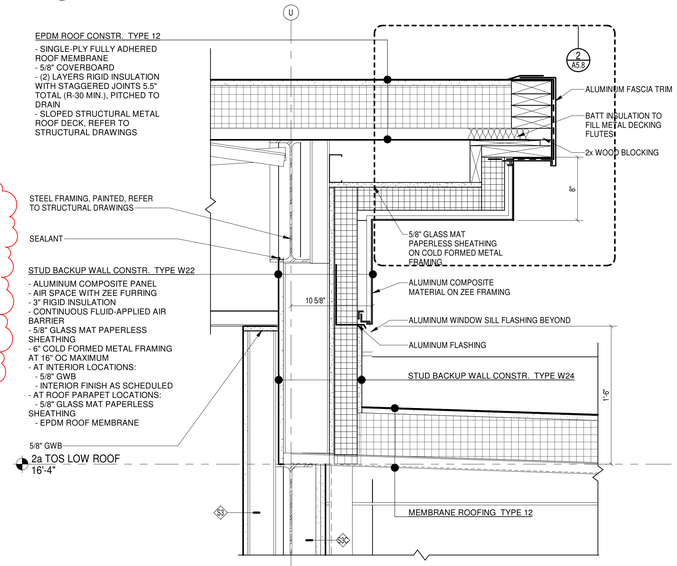
8 A5.6 TYPICAL BRICK SHELF DETAIL
1 1/2" = 1'-0"



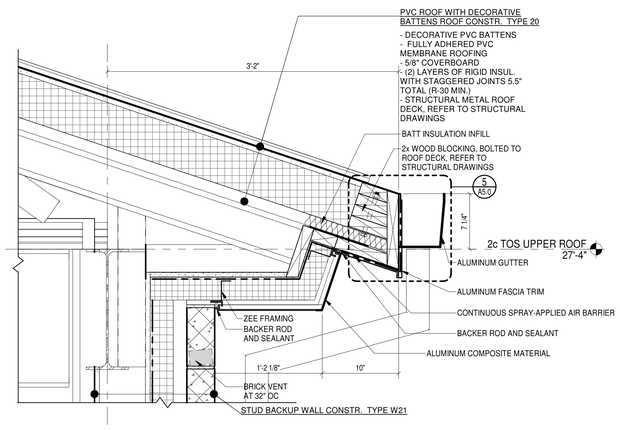
7 A5.6 CORNICE DETAIL AT GYM
1 1/2" = 1'-0"



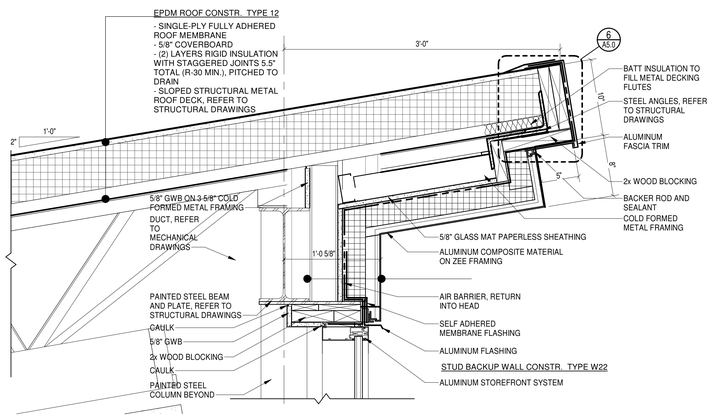
6 A5.6 SHED ROOF TRANSITION DETAIL
1 1/2" = 1'-0"



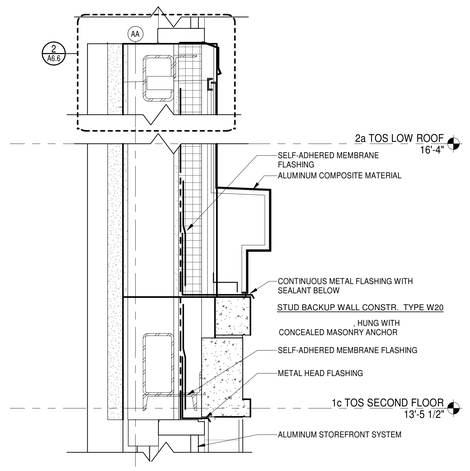
5 A5.6 CLERESTORY SIDEWALL DETAIL
1 1/2" = 1'-0"



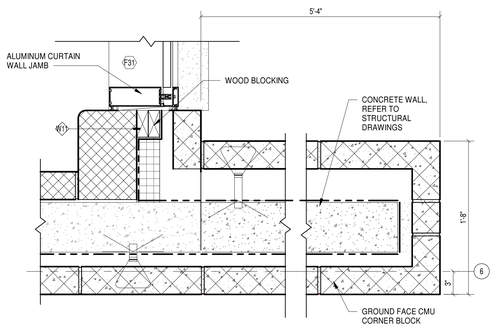
4 A5.6 TYPICAL EAVE DETAIL
1 1/2" = 1'-0"



3 A5.6 EAVE DETAIL
1 1/2" = 1'-0"



2 A5.6 CORNER WINDOW HEAD DETAIL
1 1/2" = 1'-0"



1 A5.6 SITEWALL DETAIL
1 1/2" = 1'-0"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/22/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

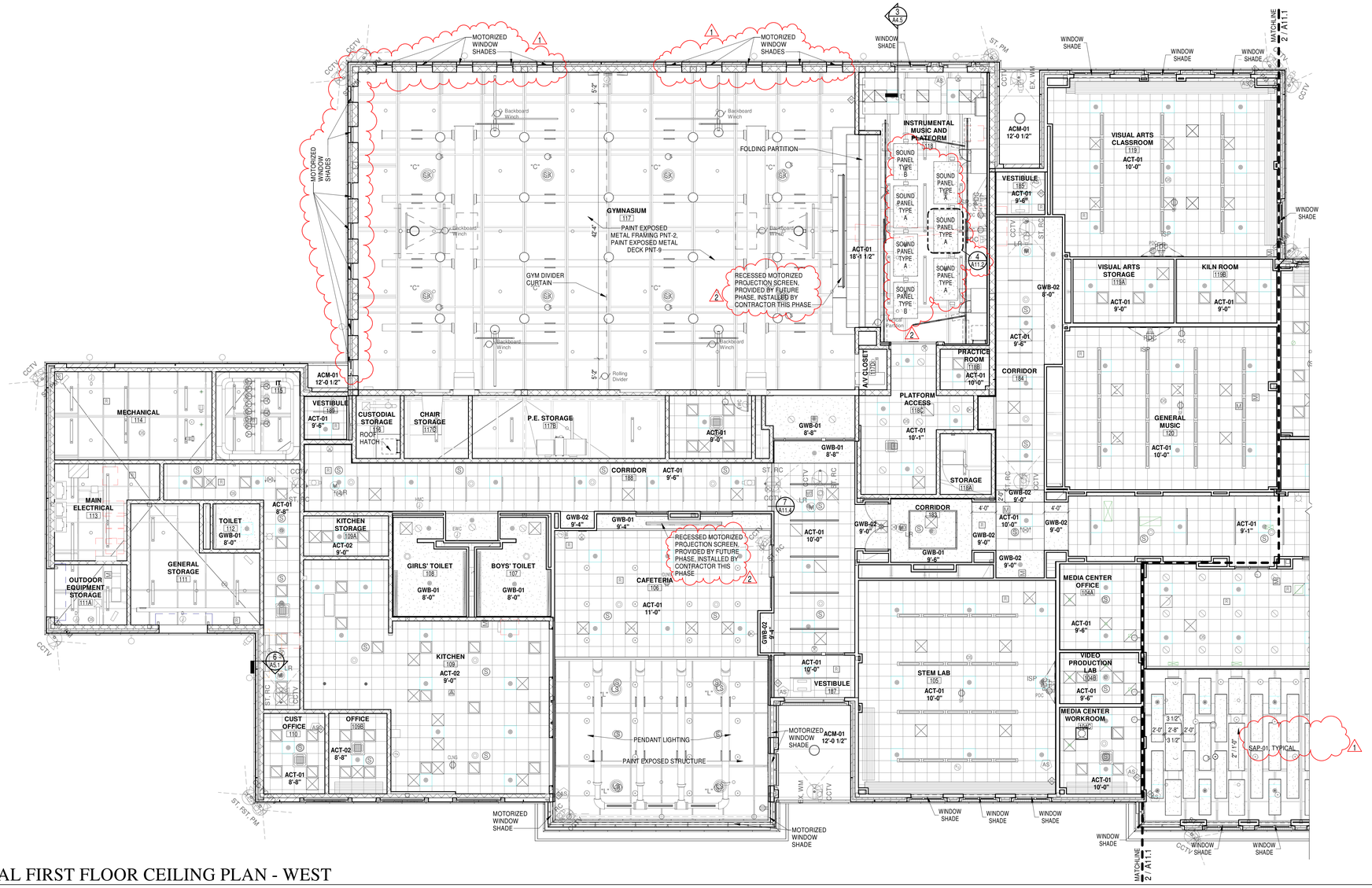
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
EXTERIOR DETAILS

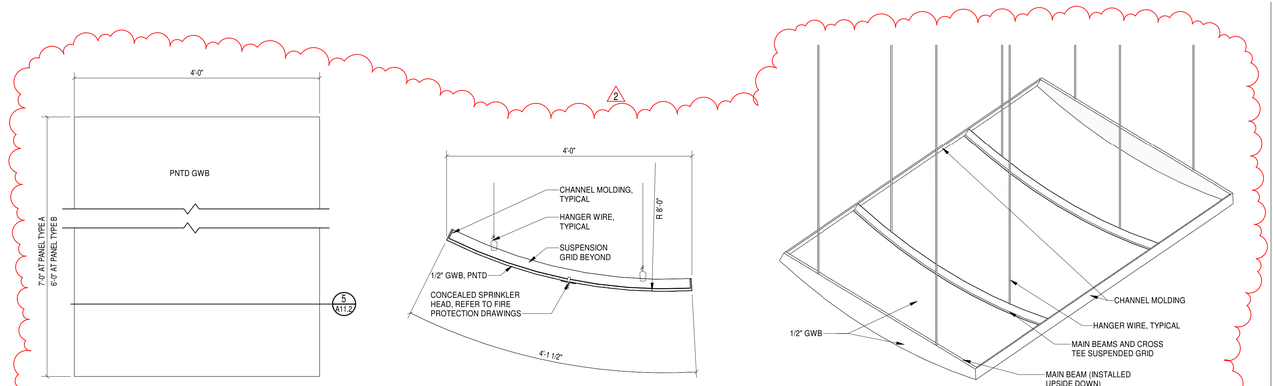
DATE 11/2/2018

DWG. NO.
A5.6

MPN Project Number: 20172215.00



1 A11.2 PARTIAL FIRST FLOOR CEILING PLAN - WEST
1/8" = 1'-0"



1 A11.2 PLAN DETAIL
1" = 1'-0"

1 A11.2 SECTION DETAIL
1" = 1'-0"

1 A11.2 AXONOMETRIC

SUSPENDED SOUND PANEL DETAILS

CEILING TYPES

ACT-01 2'x2' SUSPENDED ACT TILE SYSTEM

ACT-02 2'x2' SUSPENDED SCRUBBABLE ACT SYSTEM

ACT-03 2'x2' SUSPENDED ACT TILE SYSTEM, SUSPENDED BY ACOUSTIC HANGERS, REFER TO CEILING DETAIL SHEET

GWB-01 1/2" GWB ON SUSPENDED GRID

GWB-02 1/2" GWB ON 3 5/8" METAL FRAMING

GWB-03 ROOM CAP ASSEMBLY
- 3/4" PLYWOOD, PAINTED
- 8" METAL JOIST FRAMING

GWB-04
- 1 HR FIRE RATED HORIZONTAL PANEL ASSEMBLY
- 1" GYPSUM LINER PANEL
- 4" C-H STUD, 400CH20-34
- 5/8" GWB, TYPE X
- ASSEMBLY EVALUATION REPORT: AER-09038

ACM-01
- ALUMINUM COMPOSITE PANEL
- AIR SPACE WITH ZEE FURRING
- 3" RIGID INSUL.
- CONT. FLUID-APPLIED AIR BARRIER
- 5/8" GLASS MAT PAPERLESS SHEATHING
- 6" COLD FORMED METAL FRAMING AT 16" OC MAXIMUM

SAP-01
- SUSPENDED WOOD FIBER ACOUSTIC PANELS

PROJECT NORTH
NORTH
WEST
SOUTH
KEYPLAN

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/22/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
PARTIAL FIRST FLOOR CEILING PLAN - WEST

DATE 11/2/2018

DWG. NO.
A11.2

MPN Project Number: 2017225.00

ROOM FINISH SCHEDULE FIRST FLOOR

		FLOORS		WALLS				CEILINGS	MILLWORK		
Room No.	Room Name	Flooring	Base	N	S	E	W	Ceiling	Countertop	Cabinet	Notes
101	MAIN OFFICE SECRETARIAL AREA	CPT-1	RB-1	P-1	P-1/P-3,P-6,P-8, P-11	P-1	P-1	ACT-1/PNT GWB	PL-2	PL-1	SEE INTERIOR ELEVATIONS FOR ACCENT WALL PAINT LOCATIONS
101A	MAIN OFFICE CONFERENCE ROOM	CPT-1	RB-1	P-1	P-1	P-1	P-3	ACT-1			
101B	PRINCIPAL'S OFFICE	CPT-1	RB-1	P-1	P-1	P-3	P-1	ACT-1			
101C	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
102	HEALTH SERVICES	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			CC-1
102A	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
102B	CONSULTATION ROOM	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
102C	SUPPLY ROOM	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-2	PL-1	
103	FACULTY LOUNGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-2	PL-1	
104	MEDIA CENTER	CPT-2 & 3	RB-1	P-9/AWP-1	P-1	P-1	P-1	ACT-1/AWP-1 (PNT WHITE)/PNT DECK P-2	PL-4	PL-1	AWP-1- REFER TO ELEVATIONS FOR SIZES, LOCATIONS, AND COLORS
104A	MEDIA CENTER OFFICE	CPT-2	RB-1	P-1	P-1	P-1	P-1	ACT-1			
104B	VIDEO PRODUCTION LAB	CPT-2	RB-1	P-1	P-1	P-1	P-1	ACT-1			
104C	MEDIA CENTER WORKROOM	CPT-2	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-4	PL-1	
105	STEM LAB	LVT-1, 2 & 6	RB-1	P-1	P-1	P-6	P-1	ACT-1	EPC-1	P-1	
106	CAFETERIA	LVT-1, 2 & 3	RB-1	P-1/AWP-1	P-1/AWP-1	P-1/AWP-1	P-1/AWP-1	ACT-1/PNT EXP. STRUCT. WHITE	PL-3	PL-1	AWP-1- REFER TO ELEVATIONS FOR SIZES, LOCATIONS, AND COLORS
107	BOYS' TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1-4	EP-1/CWT-1	EP-1/CWT-1	PNT GWB			REFER TO ELEVATIONS FOR WALL TILE PATTERN AT TOILET ENTRY
108	GIRLS' TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1-4	EP-1/CWT-1	EP-1/CWT-1	PNT GWB			REFER TO ELEVATIONS FOR WALL TILE PATTERN AT TOILET ENTRY
109	KITCHEN	QT-1	QTB-1	EP-2	EP-2	EP-2	EP-2	ACT-2			
109A	KITCHEN STORAGE	QT-1	QTB-1	EP-2	EP-2	EP-2	EP-2	ACT-2			
109B	FOOD MANAGER'S OFFICE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
110	CUSTODIAL OFFICE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
111	GENERAL STORAGE	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
111A	OUTDOOR EQUIPMENT STORAGE	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
112	TOILET	PT-1	RB-1	EP-1	EP-1	EP-1	EP-1	ACT-1			
113	MAIN ELECTRICAL	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
114	MECHANICAL	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
115	IT	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
116	CUSTODIAL STORAGE	CONC.	RB-1	EP-2	EP-2	EP-2	EP-2	PNT EXPOSED			
117	GYMNASIUM	RSF-1	RB-1	P-1&8/GWP-1/A WP-1	P-1&8/GWP-1/A WP-1	P-1&8/GWP-1/A WP-1/WOOD PANELING PL-1	P-1&8/GWP-1/A WP-1	PNT EXP. STRUCT. P-3/PNT DECK P-9/PNT DUCTS P-10VG			AWP-1 PAINTED P-10 & P-11, REFER TO ELEVATIONS; STRUCTURAL FRAMING & COLUMNS P-3, METAL ROOF DECK P-9, ALL DUCTWORK, CONDUIT & PIPING P-10.
117A	P.E. OFFICE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
117B	P.E. STORAGE	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
117C	CHAIR STORAGE	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
117D	A/V CLOSET	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
117E	GYMNASIUM ALCOVE	RSF-1	RB-1	P-8	P-8	P-8	P-8	PNT GWB			
118	INSTRUMENTAL MUSIC AND PLATFORM	LVT-1	RB-1	P-1/P-2 ABOVE	P-1/P-2 ABOVE	P-1/P-2 ABOVE	P-1/P-2 ABOVE	PNT EXPOSED	PL-3	PL-1	SC-1 STAGE CURTAIN, OP-1 OPERABLE PARTITION
118A	STORAGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
118B	PRACTICE ROOM	CPT-2	RB-1	P-1/AWP-1	P-1	P-1	P-1	ACT-1			
118C	PLATFORM ACCESS	RT-1/RST-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			PAINT HANDRAIL P-8
119	VISUAL ARTS CLASSROOM	LVT-1, 2 & 6	RB-1	P-1	P-6	P-1	P-1	ACT-1	PL-3	PL-1	
119A	VISUAL ARTS STORAGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
119B	KILN ROOM	CONC.	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
120	GENERAL MUSIC	CPT-2	RB-1	P-6	P-1/AWP-1	P-1	P-1	ACT-1/PNT GWB	PL-4	PL-1	
121	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
122	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
123	TEACHER WORKROOM	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-2	PL-1	
123A	STORAGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
124	RELATED SERVICES SUITE	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1	PL-2	PL-1	
124A	CONFERENCE ROOM	CPT-1	RB-1	P-1	P-3	P-1	P-1	ACT-1			
124B	SOCIAL WORKER	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
124C	WORLD LANGUAGES	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
124D	SPEECH	CPT-1	RB-1	P-1	P-1	P-1/AWP-2	P-1	ACT-1			
124E	PSYCHOLOGIST	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
124F	STORAGE	CPT-1	RB-1	P-1	P-1	P-1	P-1	PNT GWB			
125	ELECTRICAL CLOSET	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
126	CUSTODIAL STORAGE	CONC.	RB-1	EP-2	EP-2/FRP-1	EP-2/FRP-1	EP-2	PNT EXPOSED			
127	ENGLISH LEARNERS	LVT-1 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
128	MATH INTERVENTION	LVT-1 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
129	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
129A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
130	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
130A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
131	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
131A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
132	KINDERGARTEN	LVT-1, 2 & 4	RB-1	P-1	P-1	P-4	P-1	ACT-1	PL-3	PL-1	
132A	TOILET	PT-1	CTB-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	ACT-1			
133	KINDERGARTEN	LVT-1, 2 & 4	RB-1	P-1	P-1	P-1	P-4	ACT-1	PL-3	PL-1	
133A	TOILET	PT-1	CTB-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	ACT-1			
134	KINDERGARTEN	LVT-1, 2 & 4	RB-1	P-1	P-1	P-1	P-4	ACT-1	PL-3	PL-1	
134A	TOILET	PT-1	CTB-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	EP-3/CWT-1	ACT-1			
135	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
135A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
136	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
136A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
137	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
137A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
138	GRADES 1-2 CLASSROOM	LVT-1, 2 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
138A	TOILET	PT-1	CTB-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	EP-4/CWT-1	ACT-3			
139	READING INTERVENTION	LVT-1, 2 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
139A	INSTRUCTIONAL STORAGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
140	SPECIAL EDUCATION RESOURCE ROOM	LVT-1 & 7	RB-1	P-1	P-7	P-1	P-1	ACT-3	PL-3	PL-1	
141	OT/PT RESOURCE ROOM	LVT-1 & 7	RB-1	P-7	P-1	P-1	P-1	ACT-3	PL-3	PL-1	
180	VESTIBULE	WOC-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
181	EAST LOBBY	LVT-1 & 2	RB-2	P-1/WP-1	P-1/WP-1	P-1	P-1	PNT EXP. STRUCT. P-3/PNT DECK P-9/AP-A,B,C			AWP-1- REFER TO ELEVATIONS FOR SIZES, LOCATIONS, AND COLORS
182	CORRIDOR	LVT-1 & 2	RB-2	P-1/WP-1	P-1/WP-1	P-1	P-1	ACT-1/PNT GWB			AWP-1- REFER TO ELEVATIONS FOR SIZES, LOCATIONS, AND COLORS
183	CORRIDOR	LVT-6	RB-2	P-6	P-6	P-6	P-6	P-12	SSM-2	SSM-2	
184	CORRIDOR	LVT-1 & 6	RB-2	P-1/WP-1	P-1/WP-1	P-1 & 6/WP-1	P-1/WP-1	ACT-1/PNT GWB			PAINT ACCENT P-6 AT ALCOVE ON ALL SIDES
185	VESTIBULE	WOC-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
186	WEST LOBBY	LVT-1, 2, 3 & 6	RB-2	P-1/WP-1	P-1/WP-1	P-1/WP-1	P-1/WP-1	ACT-1/PNT GWB			
187	VESTIBULE	WOC-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
188	CORRIDOR	LVT-1 & 2	RB-2	P-1/WP-1/DWC-1	P-1/WP-1	P-1/WP-1	P-1/WP-1	ACT-1			
189	VESTIBULE	WOC-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
190	SERVICE CORRIDOR	LVT-1	RB-1/RB-2	P-1	P-1	P-1	P-1	ACT-1			
191	CORRIDOR	LVT-1, 2, 3 & 7	RB-2	P-1/P-7 (AT ALCOVES)	P-1/P-7 (AT ALCOVES)	P-1/P-7 (AT ALCOVES)	P-1/P-7 (AT ALCOVES)	ACT-1/PNT GWB			
192	CORRIDOR	LVT-1, 2, 3 & 4	RB-2	P-1/WP-1/P-4 (AT ALCOVE)	P-1/WP-1/P-4 (AT ALCOVE)	P-1/WP-1/P-4 (AT ALCOVE)	P-1/WP-1/P-4 (AT ALCOVE)	ACT-1/PNT GWB			
193	CORRIDOR	LVT-3 & 4	RB-2	P-4	P-1	P-1	P-1	ACT-1	SSM-2	SSM-2	
194	VESTIBULE	WOC-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
EL-1	ELEV.	CPT-1	--	PL-1	PL-1	PL-1	PL-1	METAL			
S101	SOUTH STAIR	RST-1/RT-1 (AT LANDING)	RB-1	P-1	P-1	P-1	P-1	ACT-1			RT-1 AT LANDING, PAINT STRINGER AND HANDRAIL P-8
S102	NORTH STAIR	RST-1/WOC-1/RT-1 (AT LANDING)	RB-1	P-1	P-1	P-1	P-1	ACT-1			PAINT STRINGER AND HANDRAIL P-8

FINISH NOTES:

1. FINISHES NOTED ON THIS SCHEDULE ARE FOR GUIDANCE ONLY AND ARE GENERAL IN NATURE. IT IS NOT THE INTENT TO LIST EACH AND EVERY ITEM. COORDINATE WITH PLANS, INTERIOR ELEVATIONS, FINISH FLOOR PLANS, SPECIFICATIONS ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISHES REQUIRED TO COMPLETE WORK IN ACCORDANCE WIHT ALL CONTRACT DOCUMENTS.
2. ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED P-2, TYP.
3. FLOORING FINISH CHANGES AT DOORS TO BE AT CENTER LINE OF CLOSED DOOR U.N.O.
4. USE PREFORMED CORNERS FOR ALL RUBBER WALL BASE INSTALLATION.
5. VERIFY EXPANSION JOINT AND CONTROL JOINT LOCATIONS PRIOR TO INSTALLATION OF FLOORING.
6. SCRIBE ALL COUNTERS AND BACKSPLASHES TO WALL, CAULK TO MATCH WALL COLOR.
7. APPLY SELF LEVELING COMPOUND PRIOR TO INSTALLING FLOORING. SLABS MUST BE FREE OF IMPERFECTIONS, INDENTATIONS AND DEBRIS.
8. BRING ALL FLOOR FINISHES WALL TO WALL AND UNDER MILLWORK.
9. PROVIDE REQUIRED BRACING AT WALL HUNG CABINETRY.
10. PROVIDE BLOCKING AT ALL WALL HUNG ACCESSORIES, INCLUDING BUT NOT LIMITED TO ADA GRAB BARS.
11. ALL GWB CEILINGS AND SOFFITS TO BE PAINTED SHERWIN WILLIAMS CEILING WHITE, U.N.O.
12. ALL GUARD RAILS AND STRINGERS AT STAIRS TO BE PAINTED P-8.
13. REFER TO TOILET ROOM ELEVATIONS FOR CERAMIC WALL TILE PATTERNS.
14. USE EPOXY GROUT WITH QUARRY TILE FLOORING, TYP.
15. PROVIDE STONE THRESHOLDS AT DOORWAYS WHERE PORCELAIN TILE IS BEING USED.
16. PROVIDE COVED SCHLUTER STRIP DILEX-AHK BETWEEN CERAMIC WALL TILE AND FLOOR TILE IN ALL TOILET ROOMS, TYP.
17. REFER TO CODE PLANS FOR EXACT LOCATIONS OF PHOTOLUMINSCENT RUBBER BASE RB-2.

ROOM FINISH SCHEDULE SECOND FLOOR

		FLOORS		WALLS				CEILINGS	MILLWORK		
Room No.	Room Name	Flooring	Base	N	S	E	W	Ceiling	Countertop	Cabinet	Notes
201	SPECIAL EDUCATION RESOURCE ROOM	LVT-1 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
202	GENERAL STORAGE	CONC.	RB-1	EP-2/FRP-1	EP-2	EP-2	EP-2	ACT-1			
203	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
204	TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	ACT-1			
205	IDF	CONC.	RB-1	P-1	P-1	P-1	P-1	PNT EXPOSED			
206	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
207	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-1	P-5	P-1	P-1	ACT-1	PL-3	PL-1	
208	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
209	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-1	P-5	P-1	P-1	ACT-1	PL-3	PL-1	
213	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-1	P-5	P-1	P-1	ACT-1	PL-3	PL-1	
214	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
215	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-1	P-5	P-1	P-1	ACT-1	PL-3	PL-1	
216	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
217	GRADES 3-5 CLASSROOM	LVT-1, 2 & 5	RB-1	P-5	P-1	P-1	P-1	ACT-1	PL-3	PL-1	
218	INSTRUCTIONAL STORAGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1			
219	BOYS' TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	PNT GWB			
220	GIRLS' TOILET	PT-1	CTB-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	EP-1/CWT-1	PNT GWB			
281	BREAK-OUT AREA	LVT-6	RB-2	P-6	P-6	P-6	P-6	ACT-1	SSM-2	SSM-2	
282	CORRIDOR	LVT-1, 2, 3, 5 & 6	RB-2	P-1	P-1	P-1/P-5 (AT ALCOVE)	P-1/P-5 (AT ALCOVE)	ACT-1/PNT GWB			PAINT WALLS P-6 WHERE LVT-6 IS LOCATED
283	ALCOVE	LVT-1	RB-2	P-1	P-1	P-1	P-1	ACT-1			
284	CORRIDOR	LVT-6	RB-2	P-6	P-6	-	P-6	ACT-1/ PNT GWB	SSM-2	SSM-2	
S201	SOUTH STAIR	RST-1	RB-1	P-1	P-1	P-1	P-1	PNT GWB			PAINT STRINGER AND HANDRAIL P-8
S202	NORTH STAIR	RST-1	RB-1	P-1	P-1	P-1	P-1	PNT GWB			PAINT STRINGER AND HANDRAIL P-8

FINISH LEGEND

CARPET TILE

CPT-1: MFR- J&J FLOORING
PRODUCT- ELEVATED 7074
COLOR- 2952 VISTA
SIZE- 24" X 24"
INSTALLATION METHOD- ASHLAR
(ADMIN)

CPT-2: MFR- PATCRAFT
PRODUCT- 10K 10345
COLOR- 00510 INTERVAL
SIZE- 24" X 24"
INSTALLATION METHOD- ASHLAR
(MEDIA CENTER FIELD)

CPT-3: MFR- PATCRAFT
PRODUCT- COLOR CHOICE
COLOR- BLUESTONE 00400
SIZE- 24" X 24"
INSTALLATION METHOD- ASHLAR
(MEDIA CENTER ACCENT)

LUXURY VINYL TILE

LVT-1: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- PEANUT SHELL C113
SIZE- 6" X 36"

LVT-2: MFR- MANNINGTON
PRODUCT- NATURE'S PATH
COLOR- WINDSOR OAK GOLDEN
SIZE- 6" X 36"

LVT-3: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- CRUMB CAKE C114
SIZE- 6" X 36"

LVT-4: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- MILK THISTLE C101
SIZE- 6" X 36" (KINDERGARTEN)

LVT-5: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- ISLAND BLUE C109
SIZE- 6" X 36"

LVT-6: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- SQUAK BOX C107
SIZE- 6" X 36"

LVT-7: MFR- MANNINGTON
PRODUCT- COLOR ANCHOR
STYLE- GROOVE
COLOR- CANOPY GREEN C111
SIZE- 6" X 36"

PORCELAIN TILE

PT-1: MFR- CREATIVE MATERIALS CORP
PRODUCT- BRAVE
COLOR- BROWN (HONED)
SIZE- 12" X 24"
INSTALLATION METHOD- STAGGERED

QUARRY TILE

QT-1: MFR- CREATIVE MATERIALS CORP
PRODUCT- QUARRY TILE
COLOR- TAN
SIZE- 6" X 6"

RUBBER TILE

RT-1: MFR- JOHNSONITE
PRODUCT- RUBBER
PATTERN- CUBIS
COLOR- 41 SEA BREEZE
SIZE- 24" X 24"

RUBBER STAIR TREAD

RST-1: MFR- JOHNSONITE
PRODUCT- RUBBER STAIR TREAD
PATTERN- CUBIS
COLOR- 41 SEA BREEZE
NOTES- INTEGRATED RISER AND VISUALLY CONTRASTING STRIP AT STAIR NOSING. PROVIDE MATCHING SHEET GOODS AT LANDINGS.

RUBBER SPORTS FLOORING

RSF-1: MFR- GERFLOR
PRODUCT- TARAFLEX MULTI USE 6.2
COLOR- MAPLE 6381
NOTE- GAME LINES/STRIPING TO BE PAINTED

WALK OFF CARPET

WOC-1: MFR- J&J FLOORING
PRODUCT- INVISION
STYLE- INCOGNITO 7069
COLOR- CRYPTIC 1845
SIZE- 24" X 24"
INSTALLATION METHOD- ASHLAR

RUBBER BASE

RB-1: MFR- JOHNSONITE
PRODUCT- 4" BASE
COLOR- CHARCOAL 20

RB-2: MFR- JOHNSONITE
PRODUCT- SAFE-T FIRST THERMOPLASTIC WITH 1" PHOTOLUMINSCENT BASE
COLOR- CHARCOAL 20 (CORRIDOR)

CERAMIC TILE BASE

CTB-1: MFR- MOSA
PRODUCT- MOSA COLORS BASE
COLOR- 16660
SIZE- 6" x 6"
NOTE- PROVIDE SCHLUTER STRIP BETWEEN TILE BASE AND FLOORING.

QUARRY TILE BASE

QTB-1: MFR- CREATIVE OFFICE MATERIALS
PRODUCT- QUARRY TILE COVE BASE
COLOR- TAN
SIZE- 6" X 8"

GROUT

GT-1: MFR- LATICRETE
COLOR- ALMOND 85
LOCATION- TO BE USED WITH CERAMIC WALL TILE

GT-2: MFR- LATICRETE
COLOR- HEMP 27
LOCATION- TO BE USED WITH PORCELAIN FLOOR TILE

GT-3: MFR- LATICRETE
COLOR- GRAY
LOCATION- TO BE USED WITH QUARRY FLOOR TILE

CERAMIC WALL TILE

CWT-1: MFR- MOSA
PRODUCT- MOSA COLORS
COLOR- 16660
SIZE- 6" X 6"

CWT-2: MFR- MOSA
PRODUCT- MOSA COLORS
COLOR- 18940
SIZE- 6" X 6"

CWT-3: MFR- MOSA
PRODUCT- MOSA COLORS
COLOR- 19910
SIZE- 6" X 6"

CWT-4: MFR- MOSA
PRODUCT- MOSA COLORS
COLOR- 19900
SIZE- 6" X 6"

PLASTIC LAMINATE

PL-1: MFR- WILSONART
COLOR- HARVEST MAPLE 7953-38
LOCATION- MILLWORK

PL-2: MFR- WILSONART
COLOR- SILVER TRAVERTINE 1858K-55
LOCATION- ADMIN COUNTERTOPS

PL-3: MFR- FORMICA
COLOR- BELUGA BEIGE 3698-58
LOCATION- CLASSROOM COUNTER TOPS

PL-4: MFR- WILSONART
COLOR- NAVY LEGACY
LOCATION- MEDIA CENTER COUNTER TOPS

SOLID SURFACE MATERIAL

SSM-1: MFR- CORIAN
COLOR- PINE
SIZE- 3/4" THK, LENGTHS VARY
LOCATION- WINDOW STOOLS

SSM-2: MFR- PORCELANOSA
PRODUCT- KRION
COLOR- ATLANTIC BLUE STAR 7701
LOCATION- BENCHES (SEE DETAILS AND PLANS)

EPOXY COUNTER TOP

EPC-1: MFR- DURCON
PRODUCT- EPOXY RESIN
COLOR- TAN

LOCKERS

LK-1: MFR- REPUBLIC
COLOR- CLASSIC TAN 23

CONCRETE

CONC: SEALED CONCRETE
NOTES- REFER TO SPECIFCATIONS

PAINT

P-1: MFR- SHERWIN WILLIAMS
COLOR- SW7035 AESTHETIC WHITE
FINISH- EGGSHELL
(FIELD PAINT)

P-2: MFR- SHERWIN WILLIAMS
COLOR- SW7674 PEPPERCORN
FINISH- SEMI GLOSS
(DOORFRAMES & EXPOSED STRUCTURE)

P-3: MFR- SHERWIN WILLIAMS
COLOR- SW9128 GREEN ONYX
FINISH- EGGSHELL
(MAIN AREA & EXPOSED STRUCTURE GREEN ACCENT)

P-4: MFR- SHERWIN WILLIAMS
COLOR- SW6549 ASH VIOLET
FINISH- EGGSHELL
(CLASSROOM PURPLE ACCENT)

P-5: MFR- SHERWIN WILLIAMS
COLOR- SW6802 JACARANDA
FINISH- EGGSHELL
(CLASSROOM BLUE ACCENT)

P-6: MFR- SHERWIN WILLIAMS
COLOR- SW6780 NAUTILUS
FINISH- EGGSHELL
(MAIN AREA TEAL ACCENT)

P-7: MFR- SHERWIN WILLIAMS
COLOR- SW9041 PARISIAN PATINA
FINISH- EGGSHELL
(CLASSROOM GREEN ACCENT)

P-8: MFR- SHERWIN WILLIAMS
COLOR- SW6662 SUMMER DAY
FINISH- EGGSHELL
(MAIN AREA ORANGE ACCENT)

P-9: MFR- SHERWIN WILLIAMS
COLOR- SW9147 FAVORITE JEANS
FINISH- EGGSHELL
(BLUE ACCENT AT DECK)

P-10: MFR- SHERWIN WILLIAMS
COLOR- SW6197 ALOOF GRAY
FINISH- EGGSHELL
(LIGHT GRAY ACCENT)

P-11: MFR- SHERWIN WILLIAMS
COLOR- SW6198 SENSIBLE HUE
FINISH- EGGSHELL
(MEDIUM GRAY ACCENT)

P-12: MFR- SHERWIN WILLIAMS
COLOR- SW6779 LIQUID BLUE
FINISH- EGGSHELL
(BREAKOUT CEILING)

EPOXY PAINT

EP-1: MFR- SHERWIN WILLIAMS
COLOR- SW9147 FAVORITE JEANS
FINISH- EGGSHELL

EP-2: MFR- SHERWIN WILLIAMS
COLOR- SW7035 AESTHETIC WHITE
FINISH- EGGSHELL

EP-3: MFR- SHERWIN WILLIAMS
COLOR- SW6549 ASH VIOLET
FINISH- EGGSHELL

EP-4: MFR- SHERWIN WILLIAMS
COLOR- SW9041 PARISIAN PATINA
FINISH- EGGSHELL

IMPACT RESISTANT WALL PROTECTION

WP-1: MFR- WOLF GORDON
COLLECTION- RAMPART
PATTERN- GRAIN
COLOR- WHITE OAK GOH12648373

WALLCOVERING TRIM TO BE USED WITH WP-1
MFR: FRY REGLET
EDGE: WCT-BASE (TOP AND END PANEL)
CORNER: WCT-OSC (OUTSIDE CORNER)

DIGITAL WALL COVERING

DWC-1: MFR- KOROSEAL
PRODUCT- DIGITAL PRINT MEDIA
SUBSTRATE- TYPE II VINYL WALLCOVERING
GRAPHIC- CUSTOM DESIGN

OPERABLE PARTITION

OP-1: MFR- SKYFOLD
PRODUCT- CLASSIC OPERABLE WALL
LAMINATE- NEVAMAR: TEA STAIN SPUN YARN (GYM SIDE)
FABRIC- CARNEGIE: XOREL- METEOR 6427 766 (STAGE SIDE)

ACOUSTICAL CEILING TILE

ACT-1: MFR- ARMSTRONG
PRODUCT- ULTIMA HIGH NRC #1941
COLOR- WHITE
SIZE- 24" X 24"
GRID- PRELUDE XL 15/16"

ACT-2: MFR- ARMSTRONG
PRODUCT- CLEAN ROOM VL #868
COLOR- WHITE
SIZE- 24" X 24"
GRID- PRELUDE XL 15/16"

ACT-3: MFR- ARMSTRONG
PRODUCT- ULTIMA HIGH NRC #1941
COLOR- WHITE
SIZE- 24" X 24"
GRID- PRELUDE XL 15/16"
NOTES- SUSPENDED BY ACOUSTIC HANGERS

ACOUSTICAL WALL PANELS

AWP-1: MFR- ARMSTRONG CEILINGS
PRODUCT- TECTUM WALL PANELS
SERIES- FINALE 1" THICK
COLOR- PAINTED IN FIELD, REFER TO ELEVATIONS
SIZE- VARIES, REFER TO ELEVATIONS

AWP-2: MFR- CONWED DESIGNSCAPE
PRODUCT- RESPOND WALL MOUNTED ACOUSTICAL PANELS
UPHOLSTERY- GUILFORD OF MAINE; OPEN HOUSE- EUCALYPTUS 2047
THICKNESS- 2" THICK
SIZE- 4'-0" X 4'-0"

TACKBOARD

TB-1: MFR: HOMASOTE
PRODUCT: PINNACLE N.C.F.R. HOMASOTE
SIZE: 4'-0" x 8'-0" x 1/2" THICKNESS
COLOR: PAINT COLOR VARIES
NOTES: BOARDS TO BE PAINTED IN FIELD, REFER TO ELEVATIONS FOR EXACT COLORS.

SUSPENDED DECORATIVE ACRYLIC PANELS

AP-A: MFR- LIGHTBLOCKS
PRODUCT- DESIGNER
COLOR- CUSTOM CLEAR
THICKNESS- 1/4"

AP-B: MFR- LIGHTBLOCKS
PRODUCT- DESIGNER
COLOR- CUSTOM BLUE 423-18
THICKNESS- 1/4"

AP-C: MFR- LIGHTBLOCKS
PRODUCT- DESIGNER
COLOR- CUSTOM ORANGE 422-28
THICKNESS- 1/4"

STAGE CURTAINS

SC-1: MFR- K.M. FABRICS
PRODUCT- PRESTIGE
COLOR- 1064 BLACK

CUBICLE CURTAIN

CC-1: MFR- SOURCE ONE
PATTERN- SERENDIPITY
COLOR- POOLSIDE CSY-01

GYMNASIUM WALL PADS

GWP-1: MFR- JAYPRO
PRODUCT- VINYL WALL PADS
COLOR- GRAY

FIBERGLASS- REINFORCED POLYSTER PANELS

FRP-1: MFR- MARLITE
PRODUCT- STANDARD FRP
SURFACE- TEXTURED
COLOR- BISCUIT
SIZE- 4'-0" X 8'-0" X 3/32"

REVISIONS
ISSUED FOR BID
FEBRUARY 5, 2019

1 2/22/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR
PHILIP R. SMITH ELEMENTARY SCHOOL
949 AVERY STREET
SOUTH WINDSOR, CT 06074

MOSER
PILON
NELSON
ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
INTERIOR FINISH SCHEDULE

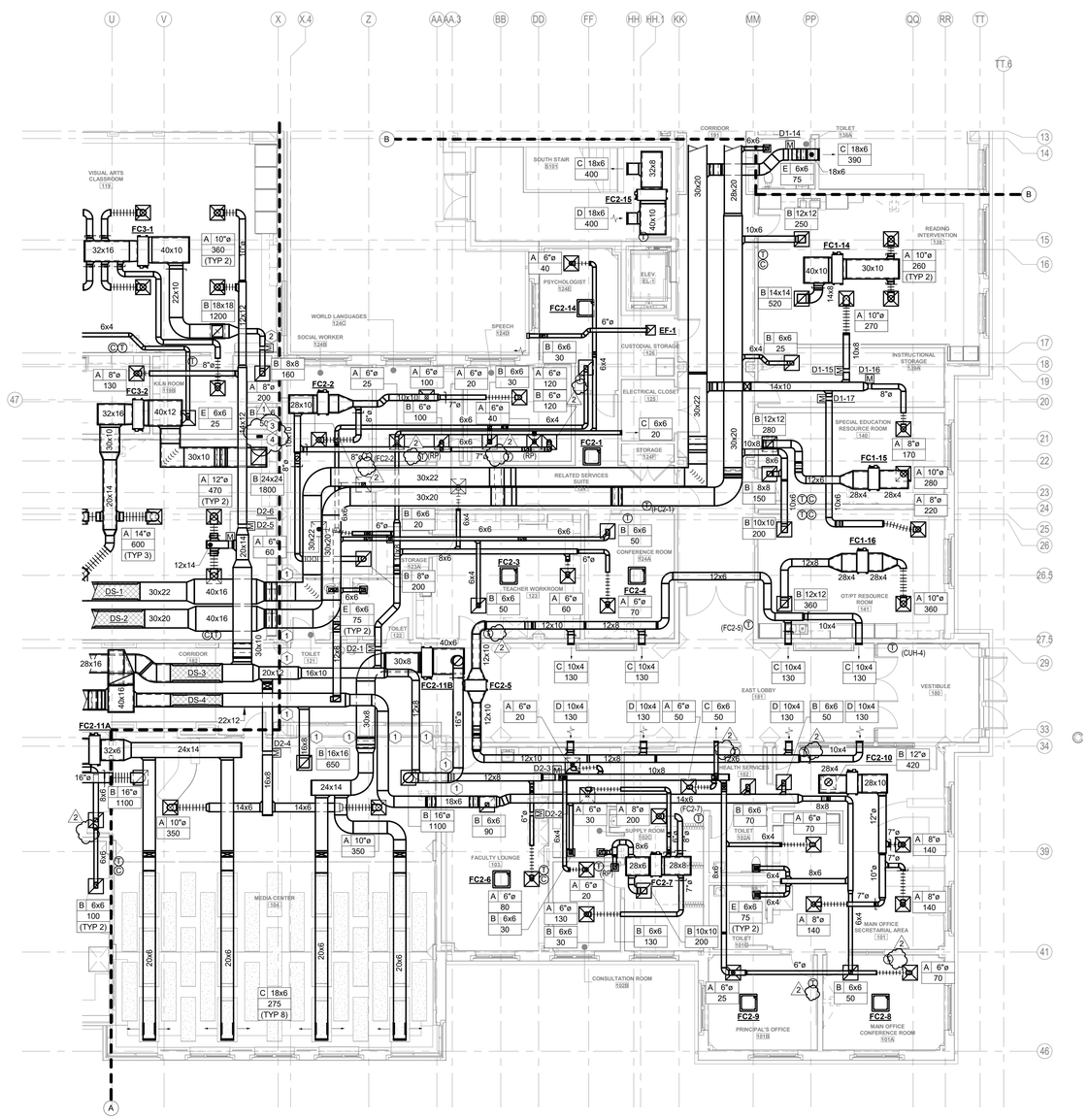
DATE 11/2/2018

DWG. NO.
AF1.0

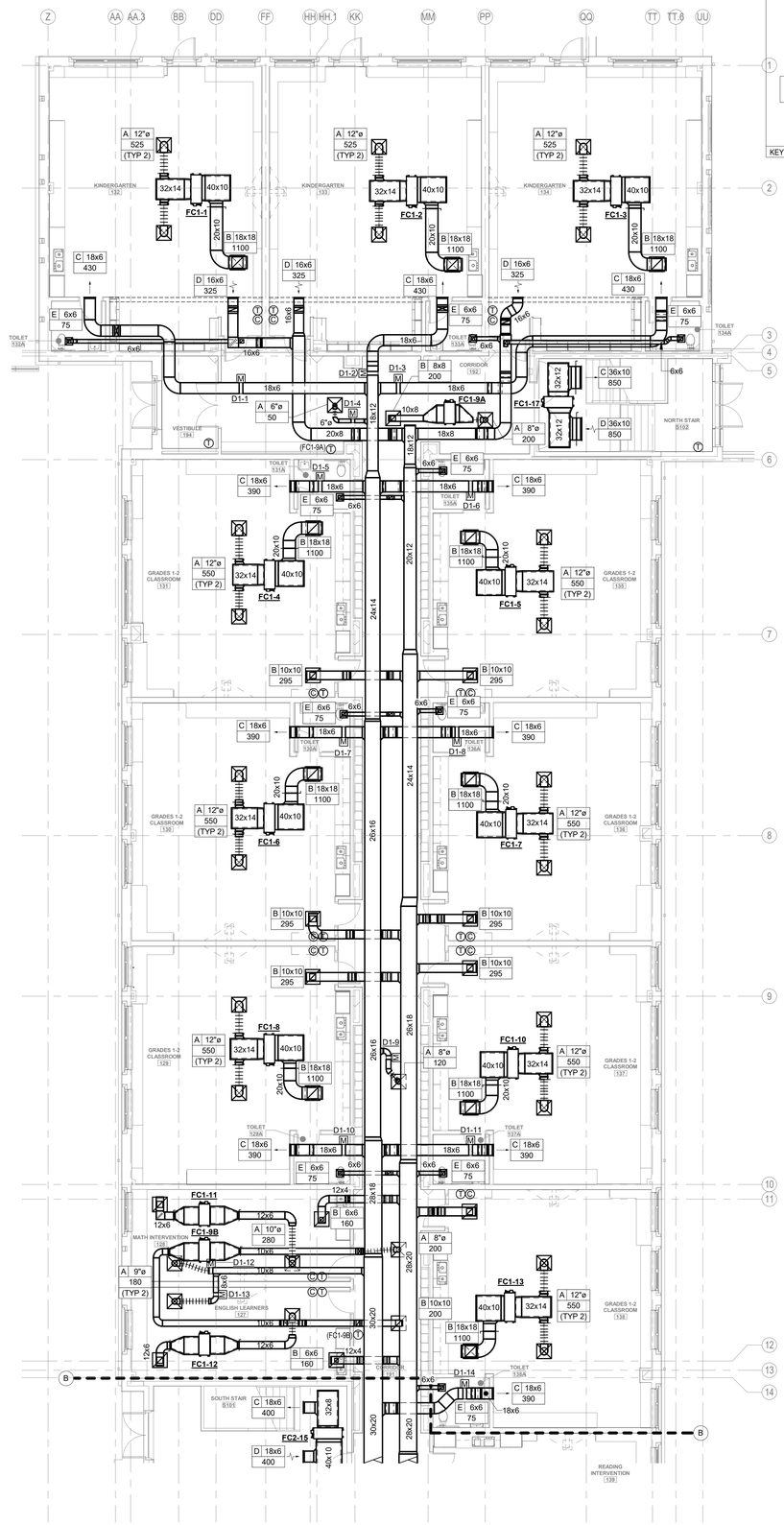
MPN Project Number: 2017223.00

GENERAL NOTES:

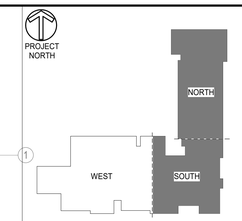
1. PROVIDE SEISMIC DUCT JOIN WHERE DUCT PENETRATES SEISMIC JOINT. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.



2 M1.1 MECHANICAL DUCTWORK FIRST FLOOR - SOUTH
1/8" = 1'-0"



1 M1.1 MECHANICAL DUCTWORK FIRST FLOOR - NORTH
1/8" = 1'-0"



REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/21/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4450
www.rzdesignassociates.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT 06109
(860) 563-6164

TITLE
MECHANICAL DUCTWORK FIRST FLOOR PLAN - NORTH AND SOUTH

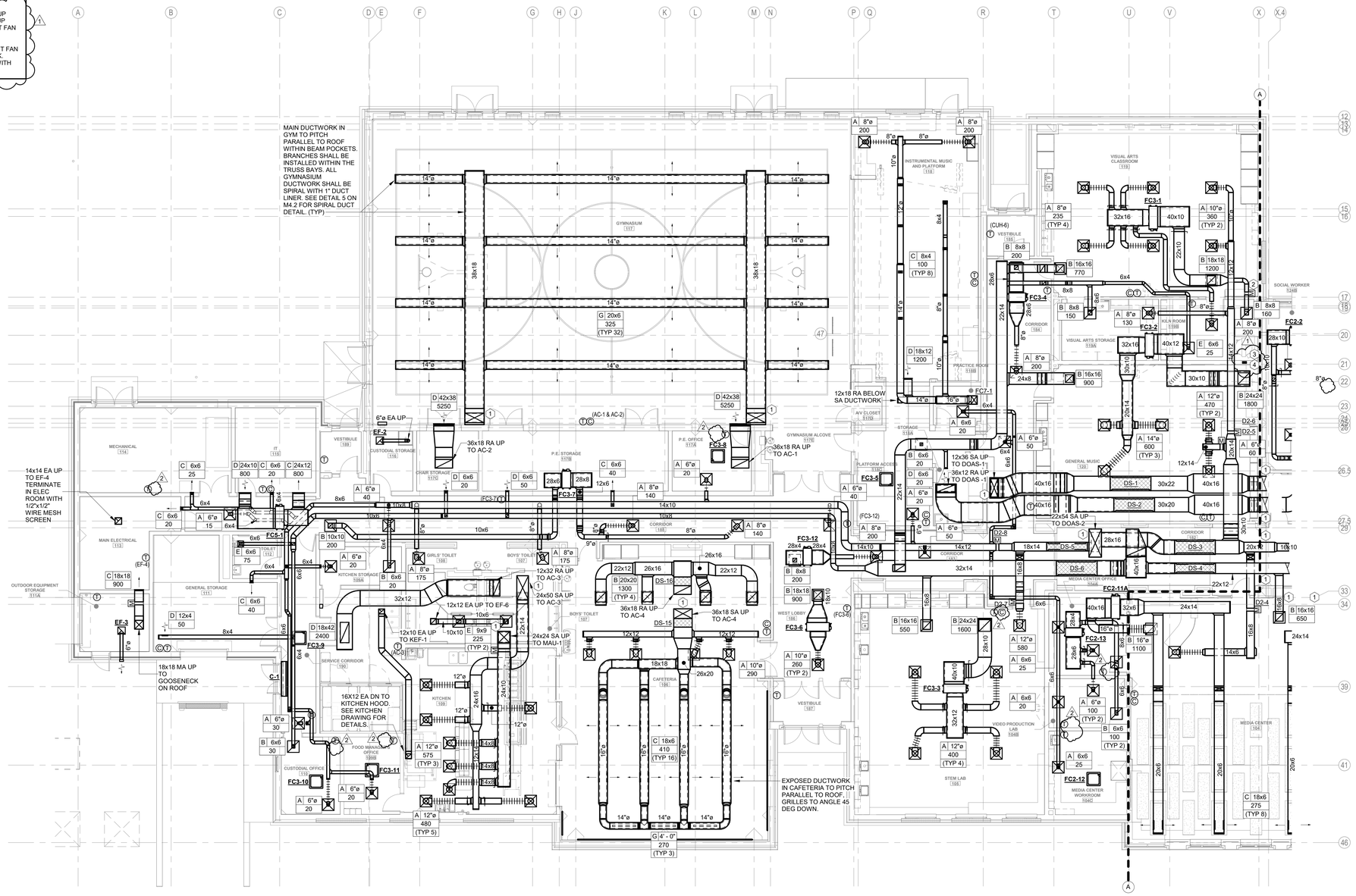
DATE 11/2/2018

DWG. NO.
M1.1

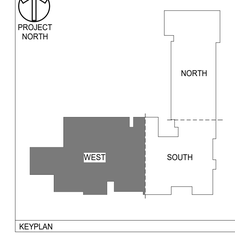
MPN Project Number: 17-200A

GENERAL NOTES:

1. PROVIDE SMOKE DETECTORS IN SUPPLY AIR DUCTWORK OF ALL AC UNITS AND DOAS UNITS. SMOKE DETECTOR SUPPLIED BY ELECTRICAL CONTRACTOR, INSTALLED IN DUCTWORK BY MECHANICAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR.
2. MOTORIZED DAMPER NORMALLY OPEN. INTERLOCK WITH KILN OPERATION TO CLOSE DAMPER WHEN KILN IS OPERATING AND KILN VENT FAN IS ON.
3. KILN EXHAUST SYSTEM CONSISTING OF PLENUM CUP ATTACHED TO BOTTOM OF KLN SPRING LOADED CUP STAND, HOSE CLAMPS, 2" FLEXIBLE HOSE, EXHAUST FAN AND MOUNTING PLATE PROVIDED BY OTHERS.
4. PROVIDE 3"x8" DUCT FROM DISCHARGE OF EXHASUT FAN UP THROUGH ROOF. TERMINATE WITH GOOSENECK. COORDINATE EXACT LOCATION OF EXHAUST FAN WITH ARCHITECTURALS DRAWINGS.



1 / M1.2 MECHANICAL DUCTWORK FIRST FLOOR - WEST
1/8" = 1'-0"



KEYPLAN

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/21/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

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949 AVERY STREET
SOUTH WINDSOR, CT 06074

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4430
www.rzdesignassociates.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
MECHANICAL DUCTWORK FIRST FLOOR PLAN - WEST

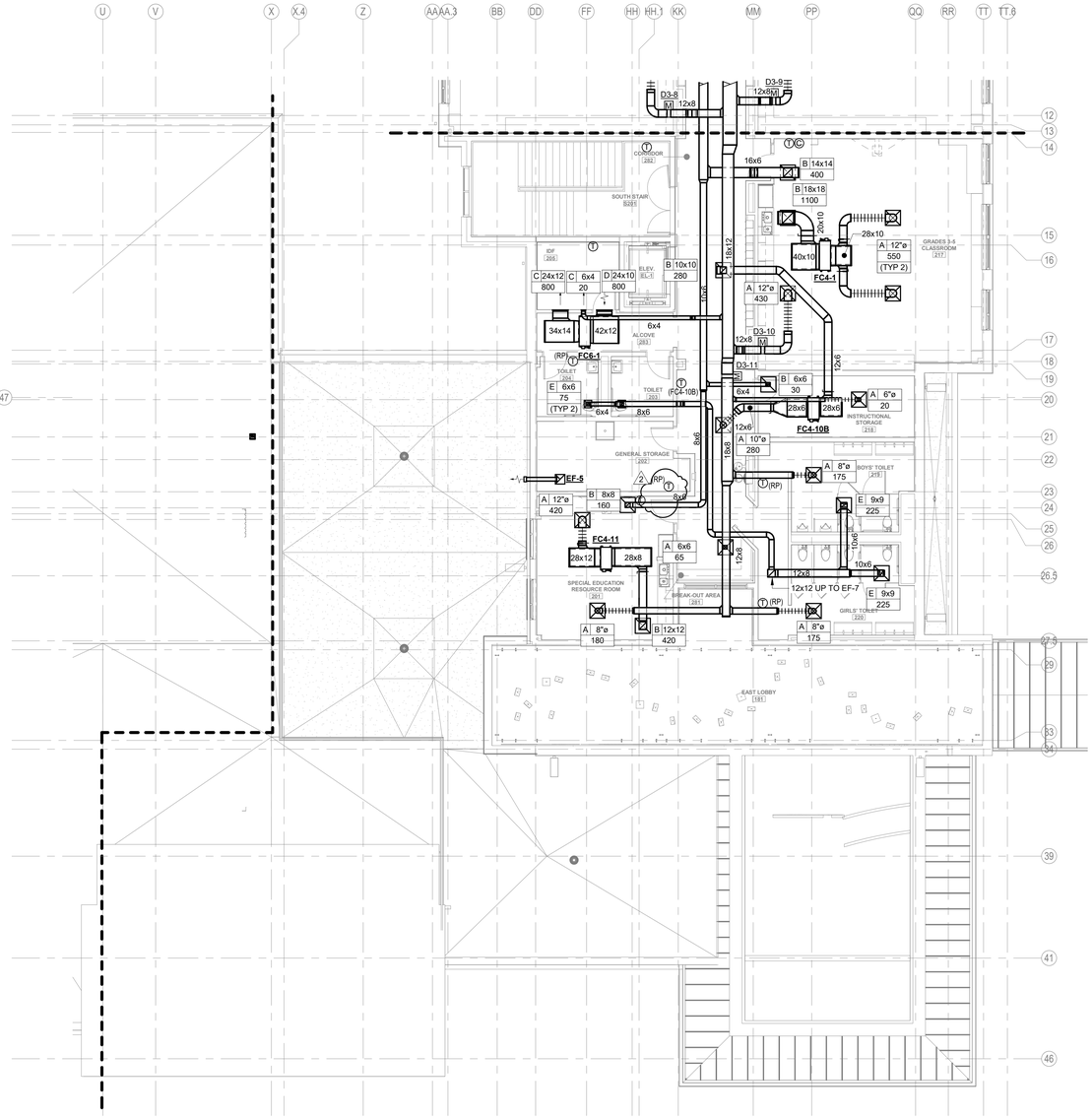
DATE 11/2/2018

DWG. NO.
M1.2

MPN Project Number: 17-206A

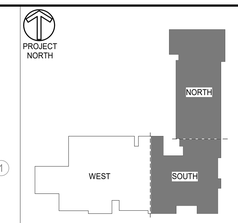
GENERAL NOTES:

1. PROVIDE SMOKE DETECTORS IN SUPPLY AIR DUCTWORK OF ALL AC UNITS AND DOAS UNITS. SMOKE DETECTOR SUPPLIED BY ELECTRICAL CONTRACTOR, INSTALLED IN DUCTWORK BY MECHANICAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR.



2 M1.3 MECHANICAL DUCTWORK SECOND FLOOR - SOUTH
1/8" = 1'-0"

1 M1.3 MECHANICAL DUCTWORK SECOND FLOOR - NORTH
1/8" = 1'-0"



KEYPLAN

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

2 2/21/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

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949 AVERY STREET
SOUTH WINDSOR, CT 06074

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4450
www.rzdesignassociates.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE

MECHANICAL DUCTWORK SECOND FLOOR PLAN - NORTH AND SOUTH

DATE 11/2/2018

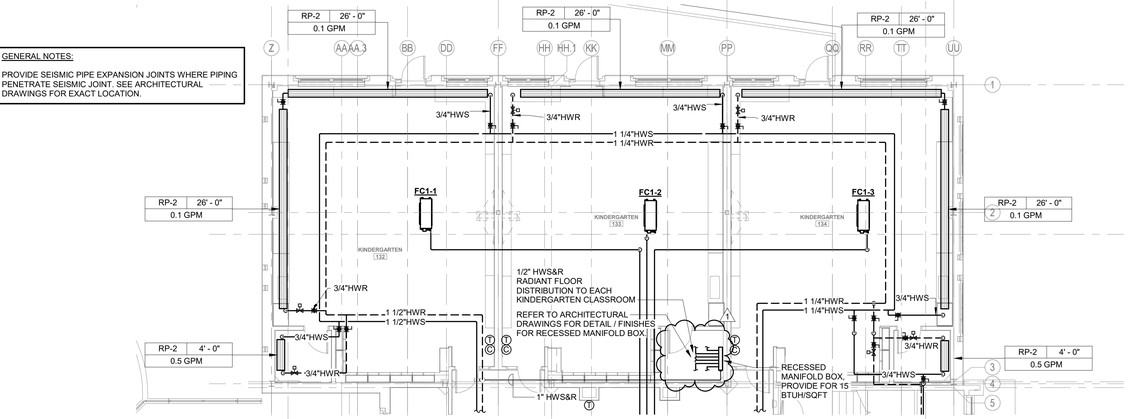
DWG. NO.

M1.3

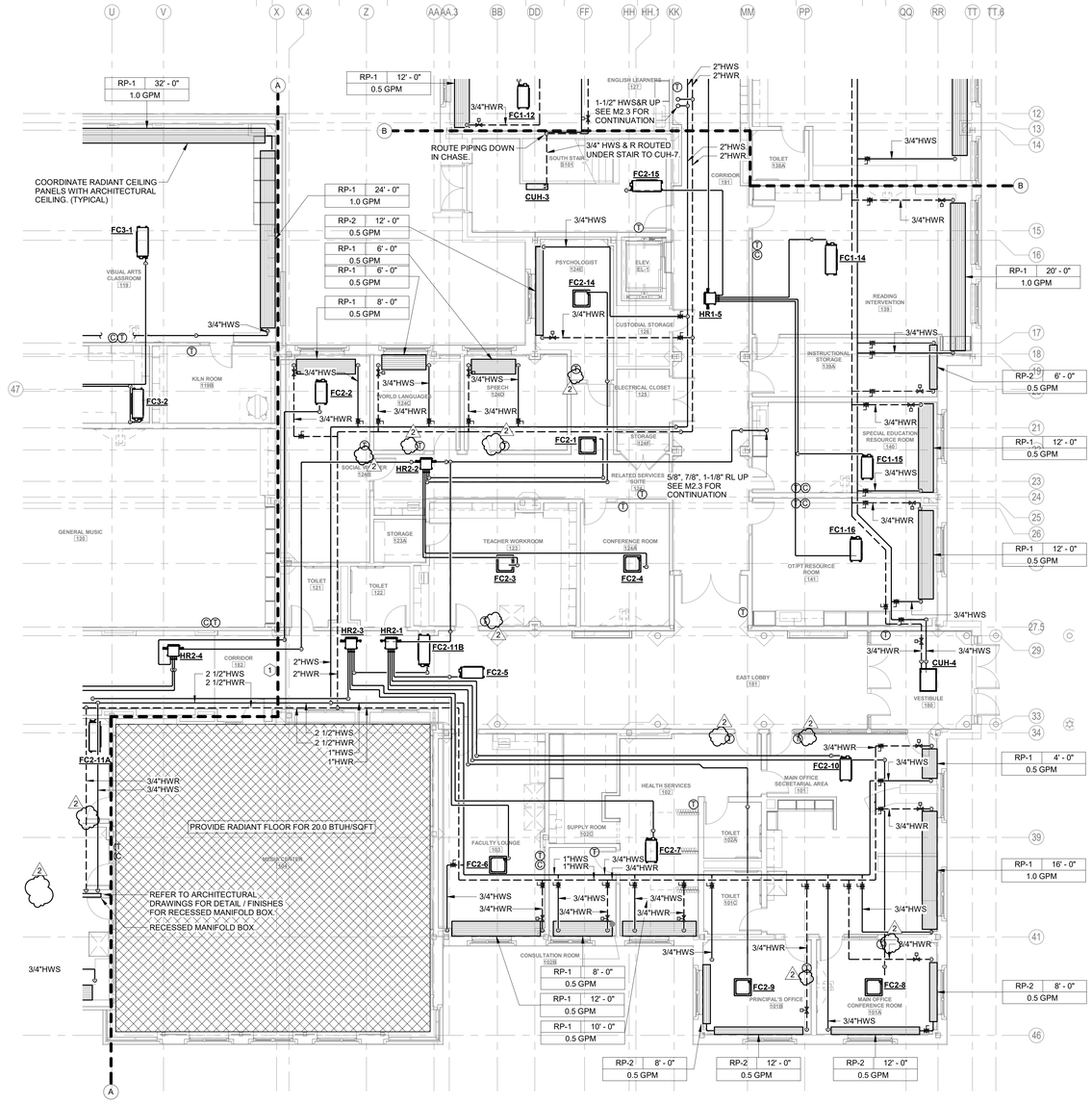
MPN Project Number: 17-200A

GENERAL NOTES:

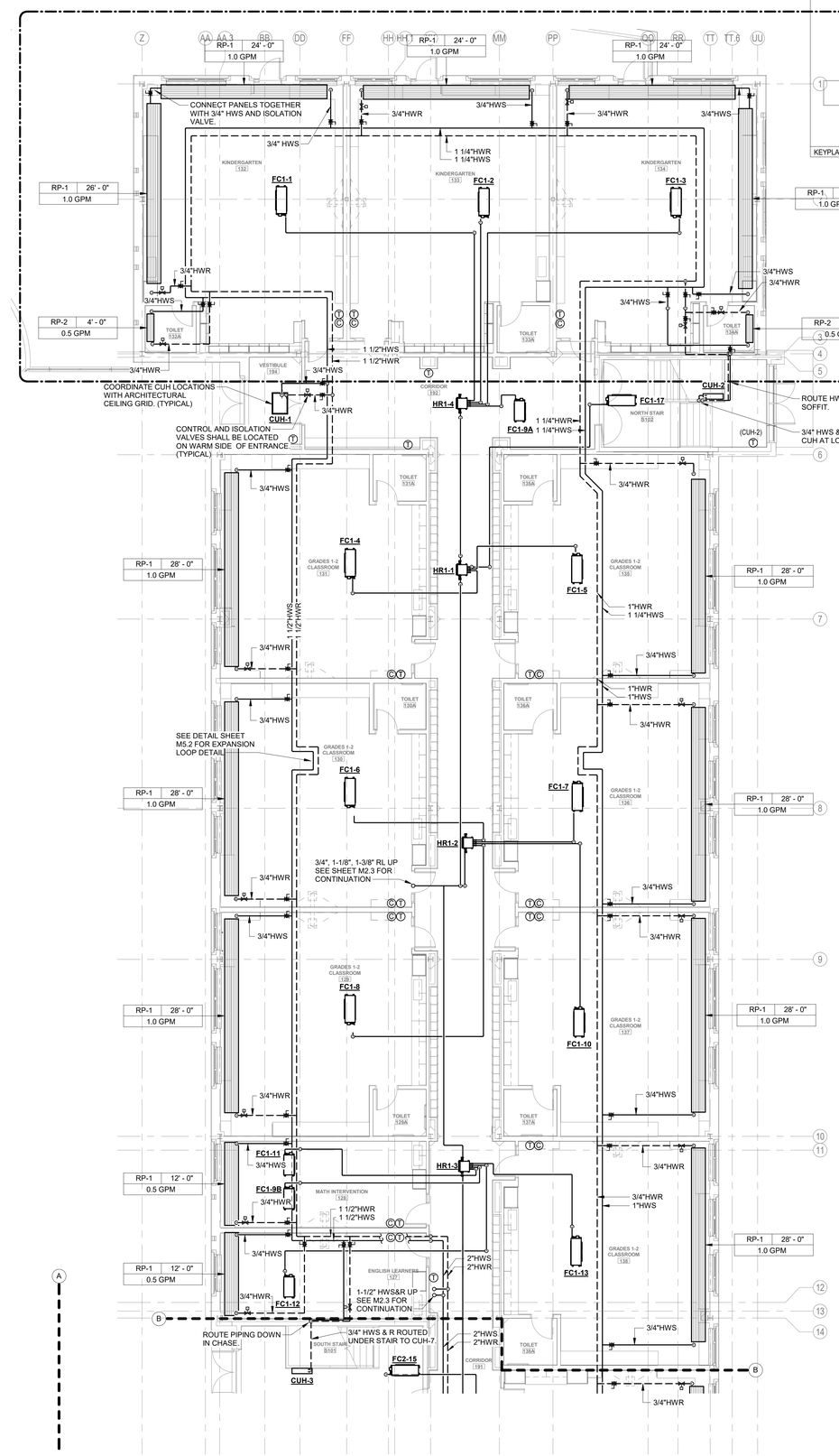
1. PROVIDE SEISMIC PIPE EXPANSION JOINTS WHERE PIPING PENETRATE SEISMIC JOINT. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.



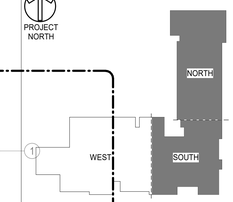
3/M2.1 ALTERNATE 2 - RADIANT FLOOR PLAN
1/8"" = 1'-0"



2/M2.1 MECHANICAL PIPING FIRST FLOOR - SOUTH
1/8"" = 1'-0"



1/M2.1 MECHANICAL PIPING FIRST FLOOR - NORTH
1/8"" = 1'-0"



REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	2/21/19	ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

PHILIP R. SMITH ELEMENTARY SCHOOL

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949 AVERY STREET
SOUTH WINDSOR, CT 06074

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4450
www.rzdesignassociates.com

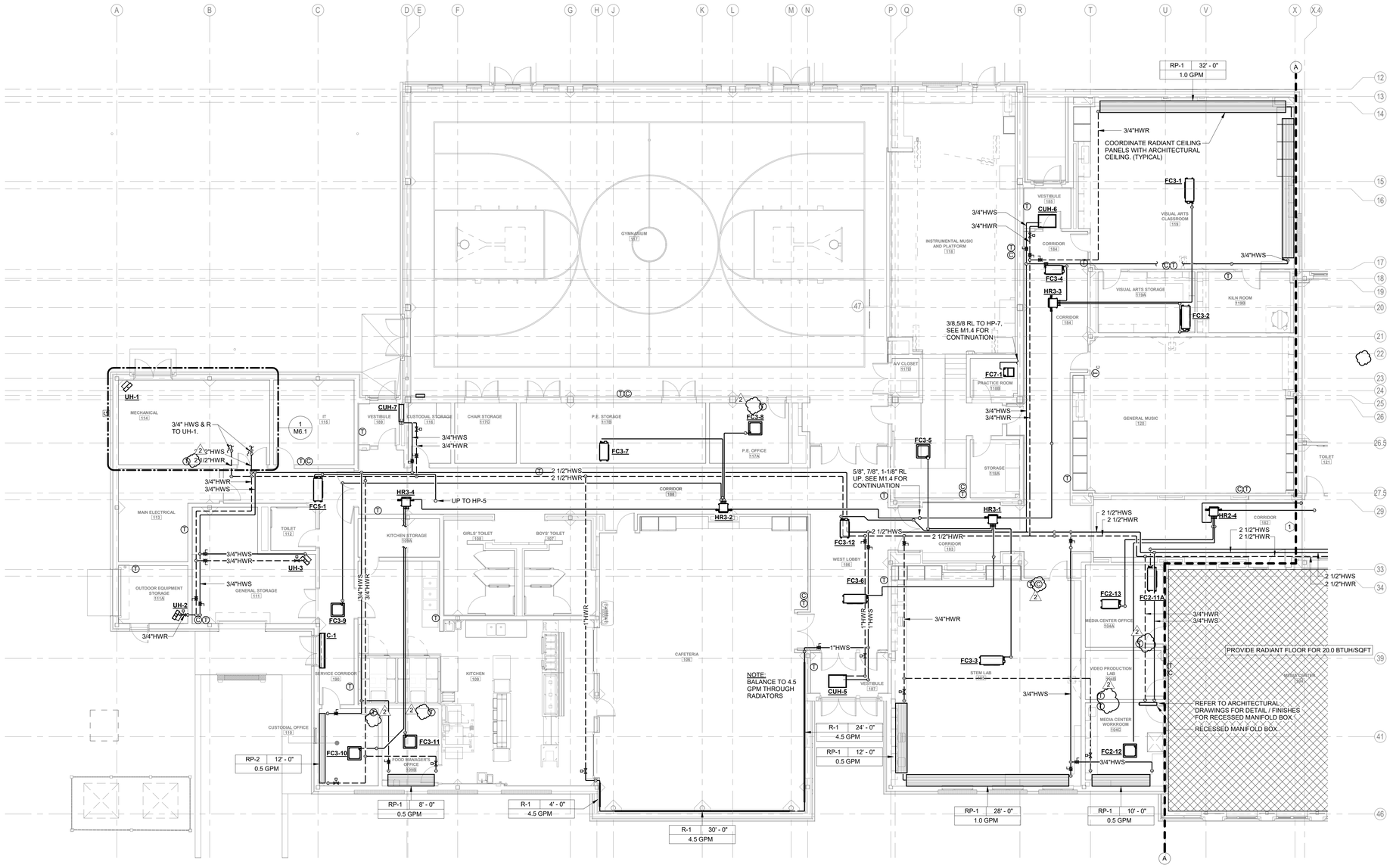
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
MECHANICAL PIPING FIRST FLOOR PLAN - NORTH AND SOUTH

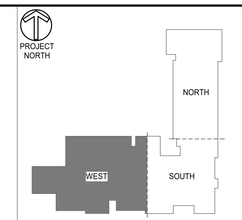
DATE 11/2/2018

DWG. NO.
M2.1

MPN Project Number: 17-200.A



1 M2.2 MECHANICAL PIPING FIRST FLOOR - WEST
1/8" = 1'-0"



KEYPLAN

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

2 2/21/19 ADDENDUM 2

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

949 AVERY STREET
SOUTH WINDSOR, CT 06074

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
P: (860) 436-4450
www.rzdesignassociates.com

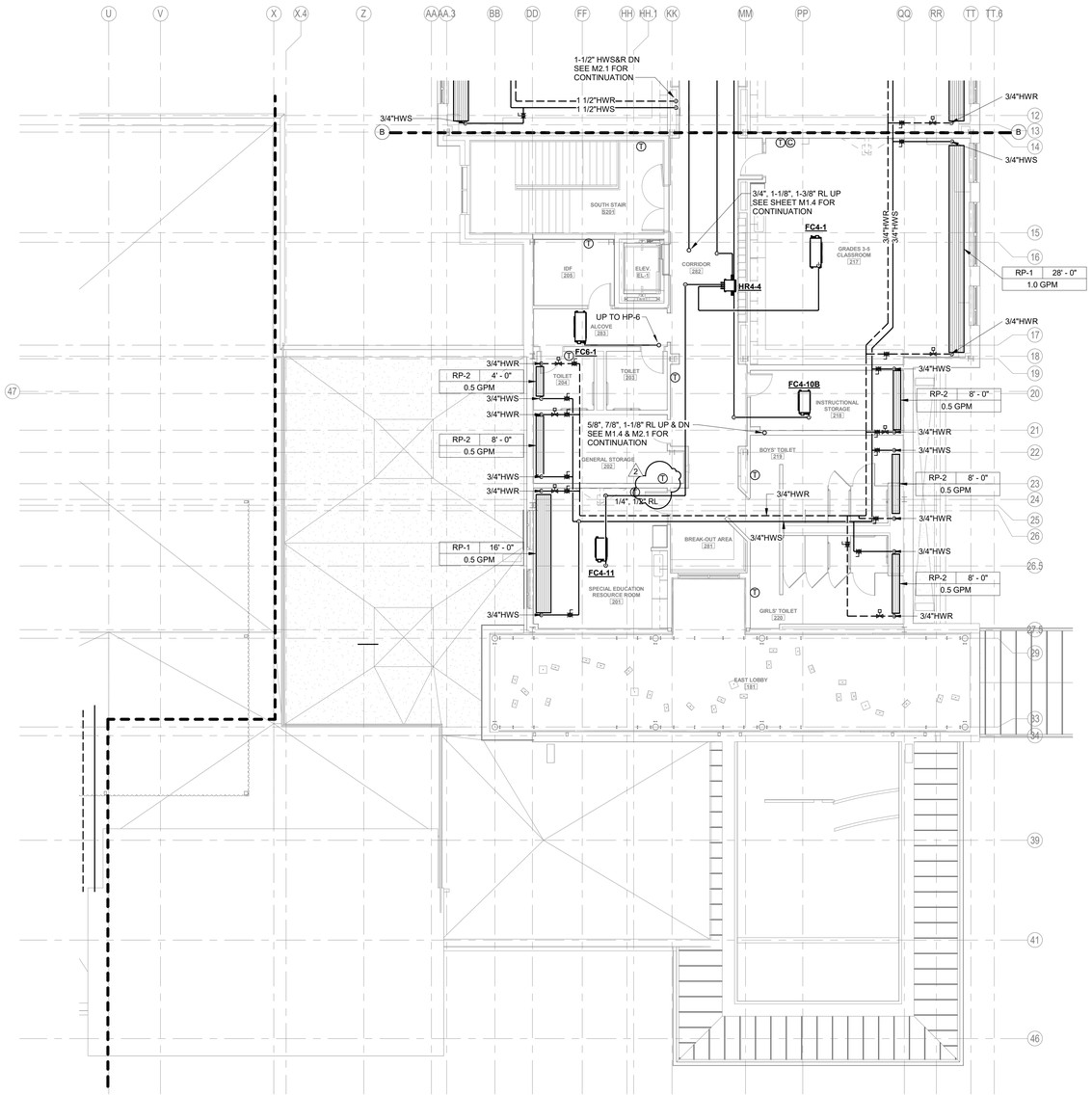
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6184

TITLE
MECHANICAL PIPING FIRST FLOOR PLAN - WEST

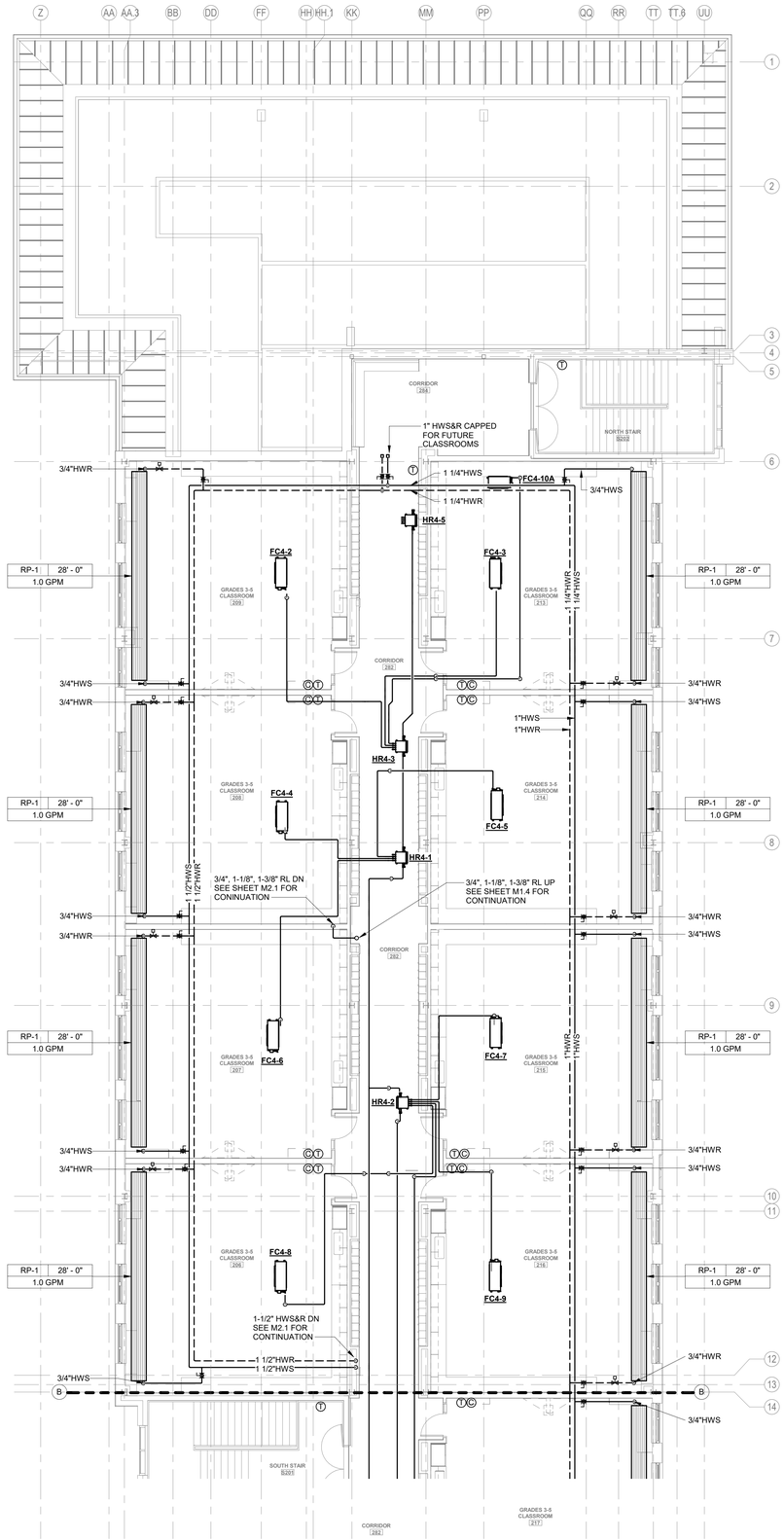
DATE 11/2/2018

DWG. NO.
M2.2

MPN Project Number: 17-200A



2 M2.3 MECHANICAL PIPING SECOND FLOOR - SOUTH
1/8" = 1'-0"



1 M2.3 MECHANICAL PIPING SECOND FLOOR - NORTH
1/8" = 1'-0"

MPN Project Number: 17-200A

PROJECT NORTH

KEYPLAN

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

2 2/21/19 ADDENDUM 2

STATE PROJECT NO.

132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

PHILIP R. SMITH ELEMENTARY SCHOOL

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SUITE 202
ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4450
www.rzdesignassociates.com

MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6104

TITLE

MECHANICAL PIPING SECOND FLOOR PLAN - NORTH AND SOUTH

DATE 11/2/2018

DWG. NO.

M2.3

OSCGR PROJECT NO. 132-0089 N • PHASE 2 OF 5
SITE AND BUILDING CONSTRUCTION
PHILIP R. SMITH ELEMENTARY SCHOOL
SOUTH WINDSOR, CONNECTICUT

ADDENDUM NUMBER THREE

March 21, 2019

The following Addendum Number Three forms a part of the Contract Documents and modifies the original specifications and drawings dated November 2, 2018, for Philip R. Smith Elementary School Phase 2 of 5: Site and Building Construction.

This Addendum Number Three consists of 1 pages, plus 1 sheet of attachments, totaling 2 sheets.

SPECIFICATIONS

None

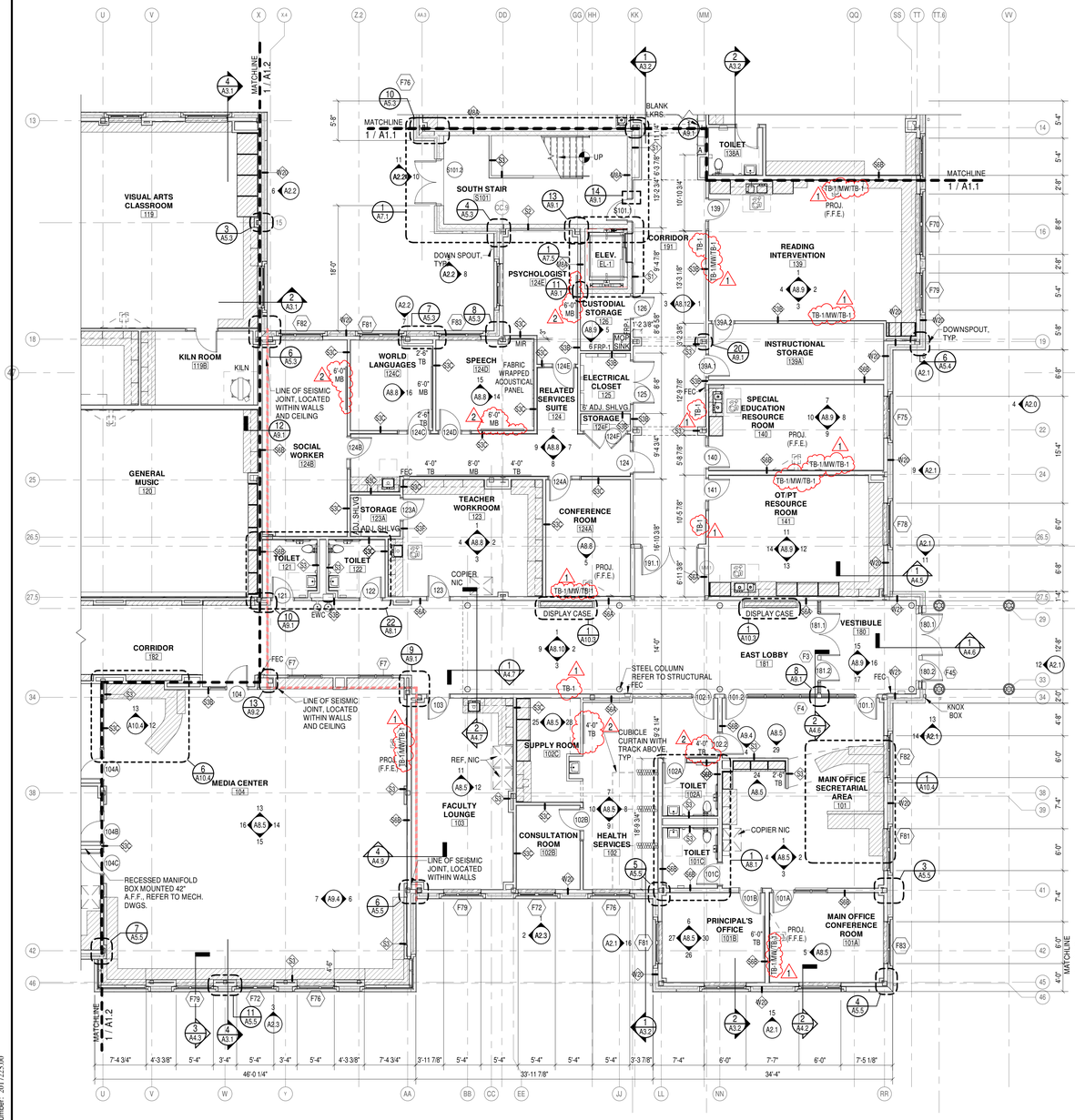
DRAWINGS

Item 1

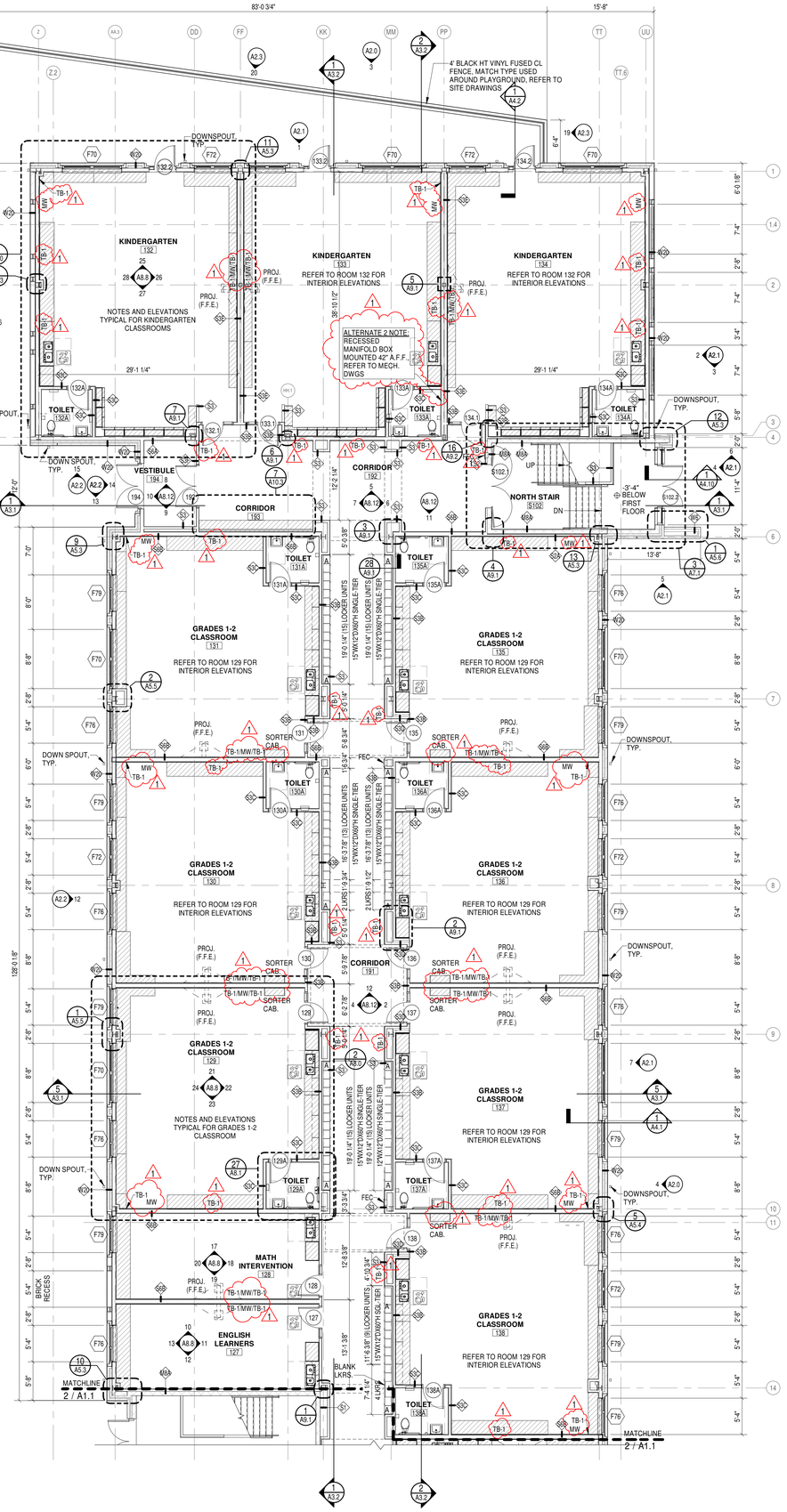
DRAWING A1.1 – PARTIAL FIRST FLOOR CONSTRUCTION PLAN – NORTH AND SOUTH:
ADD Tackboards and Markerboards as follows:

- Room 102: **ADD** (2) 4'-0" Tackboards
- Room 124B: **ADD** 6'-0" Markerboard
- Room 124D: **ADD** 6'-0" Markerboard
- Room 124E: **ADD** 6'-0" Markerboard

END OF ADDENDUM NUMBER THREE

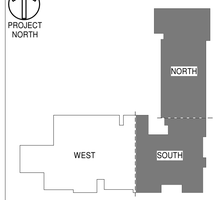


2 / A1.1 PARTIAL FIRST FLOOR CONSTRUCTION PLAN - SOUTH
1/8" = 1'-0"



1 / A1.1 PARTIAL FIRST FLOOR CONSTRUCTION PLAN - NORTH
1/8" = 1'-0"

PROJECT NORTH



KEYPLAN

HATCH INDICATES MILLWORK

LEGEND

GENERAL NOTES:

1. DIMENSIONS SHOWN ON ARCHITECTURAL FLOOR PLANS AND ENLARGED PLAN DETAILS ARE, TO FACE OF STUD, TO FACE OF MASONRY, OR TO CENTERLINE OF COLUMN UNLESS OTHERWISE.
2. REFER TO SHEET C01.1 CODE PLANS FOR FIRE RATED PARTITION. LOCATIONS AND RATINGS.
3. REFER TO SHEET A0.3 FOR INTERIOR PARTITION TYPES.
4. REFER TO INTERIOR ELEVATIONS FOR TACK BOARD AND MARKERBOARD DIMENSIONS.

REVISIONS

ISSUED FOR BID
FEBRUARY 5, 2019

1	2/19/19	ADDENDUM 1
2	3/21/19	ADDENDUM 3

STATE PROJECT NO.
132-0089 N
PHASE 2 OF 5

TOWN OF SOUTH WINDSOR

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MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CT. 06109
(860) 563-6164

TITLE
PARTIAL FIRST FLOOR CONSTRUCTION PLAN - NORTH AND SOUTH

DATE 11/2/2018

DWG. NO.
A1.1

MPN Project Number: 2017225.00

Minimum Rates and Classifications for Building Construction

Connecticut Department of Labor
Wage and Workplace Standards Division

ID# : B 26387

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: 132-0089N Project Town: South Windsor

State# FAP#:

Project: Philip R Smith Elementary School

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	38.25	27.96
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	30.99

As of: **Thursday, August 01, 2019**

2) Boilermaker	38.34	26.01
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	34.72	32.55 + a
3b) Tile Setter	34.90	25.87
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
3e) Plasterer	33.48	32.06

As of: **Thursday, August 01, 2019**

Project: Philip R Smith Elementary School

------LABORERS------

4) Group 1: Laborers (common or general), acetylene burners, concrete specialists, wrecking laborers, fire watchers.	30.75	20.84
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofer/mixer/nozzleman (Person running mixer and spraying fireproof only).	31.00	20.84
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	31.25	20.84
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is $26.80.	31.75	20.84
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	31.50	20.84

As of: **Thursday, August 01, 2019**

4e) Group 6: Blasters, nuclear and toxic waste removal.	33.75	20.84
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	31.75	20.84
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	29.03	20.84
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	28.49	20.84
4i) Group 10: Traffic Control Signalman	18.00	20.84
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Vinyl Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	33.53	25.66

As of: **Thursday, August 01, 2019**

5a) Millwrights	34.04	26.09
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	40.00	27.67+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	53.37	33.705+a+b
-----LINE CONSTRUCTION----		
Groundman	26.50	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00

As of: **Thursday, August 01, 2019**

8) Glazier (Trade License required: FG-1,2)	38.18	21.80 + a
9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77
----OPERATORS----		
Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over), work boat 26 ft. and over and Tunnel Boring Machines. (Trade License Required)	40.97	24.80 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	40.64	24.80 + a
Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar);Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	39.88	24.80 + a

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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	39.48	24.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	38.87	24.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	38.87	24.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	38.55	24.80 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	38.20	24.80 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	37.79	24.80 + a

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Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	37.34	24.80 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	35.24	24.80 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	35.24	24.80 + a
Group 12: Wellpoint operator.	35.18	24.80 + a
Group 13: Compressor battery operator.	34.58	24.80 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	33.41	24.80 + a

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Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	32.99	24.80 + a
Group 16: Maintenance Engineer/Oiler.	32.32	24.80 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	36.76	24.80 + a
Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	34.26	24.80 + a
------PAINTERS (Including Drywall Finishing)------		
10a) Brush and Roller	34.62	21.80

10b) Taping Only/Drywall Finishing	35.37	21.80
10c) Paperhanger and Red Label	34.12	21.05
10e) Blast and Spray	37.62	21.80
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	43.62	32.06
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	37.60	20.65

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14) Roofer (slate & tile)	38.10	20.65	
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	37.98	38.31	
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	43.62	32.06	
------TRUCK DRIVERS------			
17a) 2 Axle	29.51	24.52 + a	
17b) 3 Axle, 2 Axle Ready Mix	29.62	24.52 + a	

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17c) 3 Axle Ready Mix	29.67	24.52 + a
17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.72	24.52 + a
17e) 4 Axle Ready Mix	29.77	24.52 + a
17f) Heavy Duty Trailer (40 Tons and Over)	29.98	24.52 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.77	24.52 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	43.92	15.84 + a

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19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.*

***Note: Hazardous waste premium $3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra $4.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - $1.50 extra
Crane with 200 ft. boom (including jib) - $2.50 extra
Crane with 250 ft. boom (including jib) - $5.00 extra
Crane with 300 ft. boom (including jib) - $7.00 extra
Crane with 400 ft. boom (including jib) - $10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

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Project: Philip R Smith Elementary School

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

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